Positive psychology for overcoming symptoms of depression: A pilot study exploring the efficacy of a positive psychology self-help book versus a CBT self-help book

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Positive Psychology for Overcoming Symptoms of Depression: A Pilot Study Exploring the Efficacy of a Positive Psychology Self-Help Book Versus a CBT Self-Help Book

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Running head: POSITIVE PSYCHOLOGY FOR DEPRESSION

Abstract

Background: Depression is an extremely common mental health disorder, with prevalence rates rising. Low-intensity interventions are frequently used to help meet the demand for treatment. Bibliotherapy, for example, is often prescribed via books on prescription schemes (for example 'Reading Well' in England) to those with mild-to-moderate symptomology. Bibliotherapy can effectively reduce symptoms of depression (Naylor et al., 2010). However, the majority of self-help books are based on cognitive behavioural therapy (CBT), which may not be suitable for all patients. Research supports the use of positive psychology interventions for the reduction of depression symptoms (Bolier et al., 2013) and as such self-help books from this perspective should be empirically tested.

Aims: This study aimed to test the efficacy of '*Positive Psychology for Overcoming Depression'* (Akhtar, 2012), a self-help book for depression that is based on the principles of positive psychology, in comparison to a CBT self-help book that is currently prescribed in England as part of the Reading Well books on prescription scheme.

Method: Participants ($N = 115$) who were not receiving treatment, but had symptoms of depression, read the positive psychology or the CBT self-help book for 8-weeks. Depression and well-being were measured at baseline, post-test, and one-month follow-up.

Results: Results suggest that both groups experienced a reduction in depression and an increase in well-being, with no differences noted between the two books.

Conclusions: Future directions are discussed in terms of dissemination, to those with mild to moderate symptoms of depression, via books on prescription schemes.

1. Introduction

Depression is an extremely common mental health disorder. The Adult Psychiatric Morbidity survey (McManus, Bebbington, Jenkins & Brugha, 2016) estimate the 12-month prevalence rate in the UK is around 2.9%. Increases from 2007 (2.6%) (McManus, Meltzer, Brugha, Bebbington, & Jenkins, 2009) and 1993 (1.8%) (Meltzer, Gill, Petticrew & Hinds, 1995) have been noted. In 2010/11, The Centre For Economic Performance (2012) reported that the National Health Service (NHS) spent £0.2 billion providing psychotherapy. Psychotherapy is evidence-based (Cuijpers et al., 2013) and NICE (2009) recommend its use for those with mild to severe depression. Demand, however, continues to outstrip capacity in the UK (NICE, 2011). The National Prescribing Centre (2010) report that the NHS spent around £227 million on antidepressant medications and although evidence supports the use of such treatment (Gartlehner et al., 2011), NICE (2009) only recommends they are prescribed to those with moderate to severe depression.

The large and rising demand for psychotherapy and the cost of providing such care in the UK led to the introduction of the 'Improving Access to Psychological Therapies' (IAPT) programme (Layard et al., 2006). Patients with mild-to-moderate depression receive the least intrusive intervention first, with the aim of reducing their symptomology and also preventing their symptoms from worsening whilst waiting for access to psychotherapy. Low-intensity interventions such as bibliotherapy are recommended by NICE (2009) to treat those with mild-to-moderate depression. Evidence supports their use for this patient group (Floyd, Scogin, Mckendree-Smith, Floyd, & Rokke, 2004), however bibliotherapy in the UK predominantly stems from a Cognitive Behavioural (CBT) perspective and if there isn't a good person-activity fit with CBT then there are few other options available to these patients; other than joining a large waiting list for psychotherapy or taking antidepressant medications. CBT for the treatment of depression is evidence-based (see Cuijpers et al. (2013) for an

overview), however, evidence is emerging from other fields of psychology regarding low-intensity interventions. For example, within the field of positive psychology evidence supports the use of low-intensity interventions for mild-to-moderate depression.

Positive psychology interventions (PPIs) are '*treatment methods or intentional activities aimed at cultivating positive feelings, positive behaviors, or positive cognitions'* (Sin and Lyubomirsky 2009; p. 467). PPIs were initially designed to increase well-being, however evidence suggests that PPIs that are unguided can also reduce depression symptoms. Seligman, Steen, Park and Peterson (2005), recruited 577 adults via the website that accompanies Seligman's (2002) book '*Authentic Happiness*'. Participants were randomised into one of four unguided PPIs that were delivered via the internet, or into a placebo control group. There were no differences in depression at baseline, but those who used either of the two tasks listed below had significantly decreased depression scores for up to six months post-intervention. The "Three good things" task asked participants to write down three things that went well each day and their causes every night for one week. The "Using signature strengths in a new way" task asked *participants* to take the Values in Action Character Strengths online measure (available via authentichappiness.org). This questionnaire revealed participants top five scoring strengths, which are referred to as signature strengths. They were then asked to use their signature strengths in new or different ways for one week. Participants in this study were however recruited via a website that accompanies a positive psychology book which they had purchased. The study was advertised to participants using the title '*Happiness Exercises*' and the author of the book (who also led this research) discussed these interventions as being beneficial for boosting happiness. Perhaps a placebo effect took place, whereby participants took part in the study expecting to feel better. The findings were however replicated by Gander, Proyer, Ruch and Wyss (2013), who concealed the nature of the study by using the title '*Train your Strengths*' to advertise the study and thus overcome

the potential for a placebo effect or experimenter bias to occur. Further researchers have also explored the impact of unguided PPIs on symptoms of depression (e.g. Mongrain, Komeylian & Barnhart, 2016; Reiter & Wiltz, 2016) with similar results, and to date two meta-analyses of the use of PPIs for depression have been conducted. Sin & Lyubomirsky, (2009) analysed twenty-five PPI studies, which measured depression as an outcome variable. Effect size *r* ranged from small (-.28) to large (.81) (Cohen, 1992) with 80% of effect sizes in favour of PPI. The unweighted mean $r = .31$ demonstrated a medium effect size. Bolier et al., (2013) later carried out an updated meta-analysis, with fourteen PPI studies, where depression was measured as the outcome variable. At post-test the standardised mean difference between the intervention group and control was $d = .23$, again indicating small effects for PPI's using Cohen's *d* (Cohen, 1988).

Disseminating these evidence-based interventions beyond a research setting, to people in the real world with symptoms of depression (Hone, Jarden & Schofield, 2015) is now a viable option. Self-help books may be one appropriate method as bibliotherapy can effectively reduce depression symptomology in comparison to no treatment (Den Boer, Wiersma & Van Den Bosch, 2004;) or treatment as usual (Naylor et al. 2010).

One method of accessing bibliotherapy is via books on prescription schemes. The first of these schemes was piloted in Cardiff in 2003 with the Welsh Assembly rolling this scheme out nationally in 2005 (NHS Direct Wales, 2011). From 2003 schemes based on the Cardiff model were in operation across the UK (NHS Direct Wales, 2011), with the Reading Well – Books on Prescription Scheme launching nationally in England in 2013 (The Reading Agency, 2013). Books are prescribed via multiple access routes, for example General Practitioners (GPs), IAPT practitioners or other healthcare professionals are able to prescribe self-help books to patients who are experiencing disorders such as depression, anxiety, phobias or chronic fatigue etc. Patients then take their prescription to a participating library,

whereby they are able to borrow the self-help title prescribed. People can also borrow any of the self-help titles available at their local library without a prescription and indeed this is a popular access route with 80% of book prescriptions in England coming via self-referrals in 2013 (The Reading Agency, 2015a).

These types of schemes, and bibliotherapy more generally, may not however be accessible to those with low levels of literacy. Indeed Martinez, Whitfield, Dafters and Williams (2008) found that the reading ages of eight of the self-help books prescribed as part of books on prescription schemes in England and Wales, ranged from 12.6 to 15.4, which could be problematic given that the National Literacy Trust (Jama & Dugdale, 2012) report that around one in six adults in the UK have literacy levels below that of an 11-year-old.

The books prescribed as part of books on prescription schemes are all derived from CBT, for example in England there are three books available for depression (Gilbert, 2009; Greenberger & Padesky, 1995; Williams, 2011) which all stem from this perspective. However, as previously discussed, there is a growing evidence base to suggest that PPIs can effectively reduce depression (Bolier et al., 2013) and, as such, bibliotherapy and books on prescription schemes should be considered as a method of disseminating these interventions to those with mild-to-moderate depression (Parks & Szanto, 2013). Until fairly recently however, there were no positive psychology self-help books that specifically targeted depression.

'*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) is the first self-help book that contains PPIs to specifically target depression. The aim of the current study is to establish whether a positive psychology self-help book, that is aimed at those with symptoms of depression, is as effective as a CBT self-help book, in terms of reducing depression and boosting feelings of well-being. This will be achieved via a randomised controlled trial (RCT) that will test the efficacy of the above self-help book in comparison to the CBT self-help

book '*Overcoming Depression: A self-help guide using Cognitive Behavioural Techniques*' (Gilbert, 2009) over an 8-week intervention period. Although grounded in the evidence-based theory of CBT, there is actually little direct evidence for the use of the above book for the reduction of depression symptomology. As a result, the current study will also seek to provide evidence for the effectiveness of Gilbert (2009) alongside Akhtar (2012).

2. Method

2.1 Sample

Three hundred and seventeen participants responded by completing the baseline questionnaire. To be eligible to take part participants needed to be aged 18 or over, provide valid contact info (e.g. email and postal address), have symptoms of depression at baseline (measured via BDI-II), not already be receiving treatment, and be based in the UK. One hundred and fifteen participants were eligible to take part in the study (see figure 1 for exclusion criteria). Participants were aged between 19 and 69 years (M = 39.48, SD = 11.32), 86.96% were female, and 90.43% were White/White British with the remaining participants made up of Asian/Asian British (5.22%), Mixed/Multiple backgrounds (1.74%), European (1.74%) or Black/Black British (0.87%). Participants' mean score on the Beck Depression Inventory-II (Beck, Steer & Brown, 1996) was 28.49 (SD = 10.06), indicating moderate depression.

2.2 Participant Flow

Figure 1 shows the flow of participants through the trial.

2.3 Power Analysis

G*Power (Erdfelder, Fauchner & Buchner, 1996) revealed that for a mixed between-within analysis of variance, with 95% power and an alpha level of .05, a total sample size of 32 participants (16 per group) was required for a small effect size (f = 0.25). Larger numbers were however recruited as high rates of attrition are commonly reported for participants using self-help interventions, who have symptoms of depression (e.g. Williams & Whitfield, 2001).

2.4 Measures

At baseline, 8-weeks post-test and one-month follow-up the participants filled out the Beck Depression Inventory – II (BDI-II, Beck, Steer & Brown, 1996). Participants were asked to rate 21 items (e.g. *'Sadness, Crying, Loss of Energy'* etc.) in terms of how often they

have felt this way during the previous two-weeks using a 4-point scale that ranges from 0 to 3, with high scores indicating a higher occurrence of each item during the two-week time period. Score > 13 indicate the presence of symptomatology. The BDI-II has demonstrated high levels of internal consistency in previous research (α = .91) (Beck, Steer, Ball & Ranieri, 1996), with α = .81, .93, .89 reported at baseline, post-intervention & follow-up in the current study.

The Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999) was also administered, with participants asked to rate four statements (e.g. '*Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?*') in terms of agreement using a 7-point scale. Higher scores indicate a positive response; except for question 4, which is reverse coded, before all items are summed to create a total score. High total scores indicate higher levels of subjective happiness. The scale has demonstrated good internal consistency in previous research (α = .79 - .94) (Lyubomirsky & Lepper, 1999), with α = .76, .88, .74 reported at baseline, post-intervention & follow-up in the current study.

The Satisfaction with Life Scale (SWL, Diener, Emmons, Larsen, & Griffin, 1985) was also administered. Participants are asked to rate their agreement with five statements (e.g. '*In most ways my life is close to my ideal*') using a 7-point scale that ranges from 7 = strongly agree to 1 = strongly disagree. High scores indicate high levels of life satisfaction. The SWL has demonstrated good internal consistency in previous research (α = .87) (Diener et al., 1985), with α = .82, .91, .89 reported at baseline, post-intervention & follow-up in the current study.

The Positive and Negative Affect Scale (PANAS, Watson, Clark & Tellegen, 1988) was also administered. Participants are asked to rate 20 emotions (e.g. *'Interested, distressed, excited'* etc.) in terms of how much they feel they have experienced each emotion over the

past few weeks using a 5-point scale that ranges from 1 = very slightly or not at all to 5 = extremely. Positive and negative emotions are summed independently to create positive and negative affect scores, with high scores indicating higher levels of affect. The PANAS has demonstrated good internal consistency (α = .86 - .90) previously (Watson, Clark & Tellegen, 1988), with α = .61/.72, .77/.62, .77/.62 reported for positive affect and negative affect respectively at baseline, post-intervention & follow-up in the current study.

Finally the Ryff Scales of Psychological Well-Being (PWB, Ryff, 1989; Ryff & Keyes, 1995) were administered to measure six facets of psychological well-being, namely; Autonomy (e.g. *'I have confidence in my opinions, even if they are contrary to the general consensus'*), Environmental Mastery (e.g. *'In general, I feel I am in charge of the situation in which I live'*), Personal Growth (e.g. *'I think it is important to have new experiences that challenge how you think about yourself and the world'*), Positive Relations with Others (e.g. *'People would describe me as a giving person, willing to share my time with others'*), Purpose in Life (e.g. *'Some people wander aimlessly through life, but I am not one of them'*), and Self-Acceptance (e.g. *'I like most aspects of my personality'*). Participants are asked to rate 42 statements in terms of agreement using a 6-point scale that ranges from 1 = strongly disagree to 6 = strongly agree. High scores indicate high levels of psychological well-being. The PWB demonstrates good internal consistency in previous research (α = .86 - .93) (Ryff, 1989; Ryff & Keyes, 1995), with α = .87/.91/ .90 (Autonomy), .64/.83/.78 (Environmental Mastery), .76/.72/.76 (Personal Growth), .70/.70/.64 (Personal Relationships), .73/.72/.72 (Purpose in Life) and .76/.87/.85 (Self-Acceptance) reported at baseline, post-intervention & follow-up in the current study.

Adherence was also measured post-intervention by asking participants to indicate how much of each chapter they had read, with responses ranging from 0% to 100%. An overall adherence score was created. Maintenance was measured at the one-month follow-up.

Participants were asked '*Have you kept the self-help book*' and '*If yes, have you continued to read the self-help book and perform the exercises it describes?*' (responses were coded Yes or No in both cases).

2.5 Materials

Participants in the PP group received '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012). This book contains twelve chapters, which discuss depression and introduce the theory of positive psychology, as well as specific topics such as gratitude or optimism. Each chapter is evidence-based and links to published research in the area in an accessible way. References are provided at the end of the book for readers who wish to follow up. The book contains exercises throughout each chapter for the reader to complete, for example the optimism chapter contains multiple exercises to cultivate optimism, such as Sheldon & Lyubomirsky's (2006) version of the 'best possible selves' interventions. In this task the reader is asked to spend twenty minutes writing about a version of their future, in which everything has gone as well as it possibly could. Participants in the CBT group received '*Overcoming Depression: A self-help guide using Cognitive Behavioural Techniques*' (Gilbert, 2009). A self-help book for depression that is available in England as part of the books on prescription scheme (The Reading Agency, 2013). Gilbert (2009) was selected due to its popularity and lower recommended retail price (RRP) in comparison to Greenberger & Padesky, (1995) and Williams, (2011). The Amazon best-selling rankings were used as a proxy to rate popularity, in the absence of loan data via books on prescription schemes. This book contains twenty-two chapters, which are split into three sections. Part One of the book helps the user to gain an understanding of depression and its causes. Part Two provides the user with guidance on managing their depression. It focuses on increasing the user's activity levels, breaking problems down into manageable steps, and looks briefly into issues such as lack of sleep and alcohol misuse etc. The book also explores the role of thoughts and feelings

in depression, and identifies methods for labelling and challenging negative thoughts that may contribute to the symptoms of depression. Part three of the book looks at particular problems associated with depression, such as guilt etc. Again each chapter is evidence-based with references provided at the end of the book. Exercises are provided throughout each chapter for the reader to complete. Table 1 shows the eight book chapters that participants were asked to read during the course of the study.

Alongside the book participants received an instruction letter, in which they were asked to read one chapter per week, and given the investigator's contact details should any issues arise. Participants also received a leaflet called '*Feeling worse not better*' which detailed where to go for help should symptoms worsen during the course of the study. Participants were sent weekly reminder emails outlining which chapter they were to read each week (see supplementary materials for instruction letter, leaflet and sample emails).

2. 6 Procedure

The study was advertised online via Action for Happiness (actionforhappiness.org) and called for participants who were '*feeling down, low, sad or experiencing symptoms of depression*'. Participants were asked to complete a questionnaire to assess their suitability to take part in the study. This questionnaire measured baseline depression and well-being scores, as well as demographic information such as age, gender, ethnicity and history of depression (participants asked "Have you been diagnosed with depression in the past?" with a Yes/No answer format). Eligible participants were randomised[1] to either the PP or CBT group. Participants were posted their self-help book and asked to read one chapter per week for 8-weeks. They received weekly emails to remind them which chapter to read. After 8-weeks post-test, and again at one-month follow-up, participants were emailed a questionnaire that

[1] Participants were randomly allocated to either the PP group (condition 1) or the CBT group (condition 2) using EXEL's random number generator formula (e.g. =RANDBETWEEN(1,2)). N = 56 participants were randomly allocated into condition 1, and N = 59 into condition 2.

measured depression and well-being post-intervention, as well as attrition, adherence and maintenance. Participants who completed all questionnaires were sent a £10 voucher.

2.7 Ethics

This study was designed in accordance with The British Psychological Society Code of Ethics and Conduct (BPS, 2009). Ethical approval was gained from Sheffield Hallam University.

3.

3.1 Attrition

Figure 1 shows rates of attrition from the study. Chi square analysis found no significant differences in dropout at post-test ($\chi(1) = .45$, $p = .50$) or one-month follow-up ($\chi(1) = .529$, $p = .47$) between the two groups. Table 2 shows the characteristics of those who withdrew. Data was pooled across the two conditions for those who withdrew and those who remained in the study. There were no significant differences between those who failed to provide data and those who did, at either the post-test or the one-month follow-up, in terms of gender, age, ethnicity, history of depression or baseline depression and well-being scores ($p > .20$ in all cases).

3.2 Sample

Table 3 shows the characteristics of the participants in the PP group (N = 21) and the CBT group (N = 19) who provided data at all three time points (e.g. baseline, 8-week post-test and one-month follow-up). Chi square analysis found no significant differences between the two groups for gender, ethnicity, history of depression, percentage who kept the book post-intervention and maintenance (continued use of the book and/or exercises post-intervention) ($p > .12$ in all cases). Independent samples t-tests indicated no significant difference between the two groups for mean age ($t(37) = -.20$, $p = .84$) or adherence (percentage of book read during the intervention period) ($t(36) = .80$, $p = .94$). Table 4 shows the mean depression (BDI-II) and well-being (SHS, SWL, PA, NA & PWB subscales) scores at baseline. A one-way multivariate analysis of variance (MANOVA) was used to test for differences in mean depression and wellbeing at baseline between those in the PP and CBT groups (see supplementary materials for assumptions). The analysis showed that there were

no significant differences between the two groups (F (11, 27) = .52, p = .87, Wilk's Λ = .81, η^2 = .19) prior to taking part in the study.

3.3 Effect of PP and CBT Bibliotherapy on Depression and Well-Being

Table 4 also shows the mean depression and well-being scores at post-test and one-month follow-up. Table 5 shows a series of 2-way between-subjects (Group: PP versus CBT) by 3-way within-subjects (Time: baseline versus post-test versus one-month follow-up) analyses of variance (ANOVAs). Depression and well-being scores were used as dependent variables (DV) to determine whether there were significant differences between the two groups across the three time points (see supplementary materials for assumptions). The analysis found that for those in both the PP and CBT groups there was a significant main effect of time, indicating significant changes in depression and well-being from baseline to follow-up. Effect sizes ranged from a low of d = .32 to a high of d = .76, indicating small to medium effect sizes using Cohen's d (Cohen, 1988). Table 4 shows that BDI-II and NA scores decreased from baseline to post-test and follow-up, whilst SHS, SWL, PA and PWB subscale scores increased over the same time frame. Post-hoc analysis, with Bonferonni adjustments revealed, that rates of depression and well-being fell significantly from baseline to post-test (p < .01 in all cases) and one-month follow-up (p < .01 in all cases), but there were no significant changes in depression and well-being between post-test and one-month follow-up (p > .13 in all cases), meaning that improvements were sustained for one month post-intervention. The main effect of group was not significant, indicating that there was no significant difference between the two books in terms of improvement in depression and well-being. There were no significant interactions between time and group for any of the depression and well-being measures.

4. Discussion

The current study sought to empirically test the efficacy of Akhtar (2012) in comparison to Gilbert (2009). It was the first RCT to test a PP self-help book designed specifically for the reduction of depression symptoms. The current study also sought to empirically test Gilbert (2009) as, although Gilbert (2009) is a popular book in the UK which is often recommended by therapists (Anderson et al., 2004), there is little empirical basis for its use.

The results of the current study show that the PP book '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) was as effective at reducing symptoms of depression and increasing feelings of well-being as the CBT book ''*Overcoming Depression: A self-help guide using Cognitive Behavioural Techniques*' (Gilbert, 2009) when delivered over an 8-week intervention period with reminder emails sent weekly. Changes in depression and well-being scores were sustained for one month post-intervention.

As a result the main issue for researchers to address, with regards to PPIs, is how best to disseminate these interventions to those who would most benefit (Hone et al., 2015). Given the findings of the current research, bibliotherapy may be one appropriate method of dissemination. Bibliotherapy can be accessed in a number of ways, for example via the private purchase of a self-help book or via books on prescription schemes.

In England, 93% of libraries take part in books on prescription schemes, with participating libraries reporting nearly half a million loans of titles included on the books on prescription scheme since 2013. Prescriptions for these books come via multiple avenues such as via GPs, IAPT services or other healthcare professionals. The vast majority in England however (80% in 2013) come via self-referrals (The

Reading Agency, 2015a). Since the scheme began in England, there has been a 97% increase in loans of the self-help titles included in this scheme, showing how inclusion of a title on this list is beneficial in terms of garnering the attention of those the book is targeting (i.e. those with mild-to-moderate symptomology). One of the main advantages of dissemination via books on prescription schemes is the ability to access those with mild-to-moderate depression who may not present for treatment via traditional routes (e.g. 80% of loans are via self-referral to the scheme). Another advantage to these types of schemes is their accessibility. The Psychiatric Morbidity Survey (McManus et al., 2016) reported a link between common mental health disorders (such as depression) and socio-economic adversity. Those who reported receiving the Employment and Support Allowance (ESA), a benefit aimed at those unable to work due to poor health or disability, were more likely to be experiencing a comorbid mental health disorder, with nearly half reporting a suicide attempt. Bibliotherapy and particularly books on prescription schemes may be especially well placed to reach these vulnerable individuals. Whereas other self-help interventions, such as computerised self-help or apps that target mental health disorders, all require the user to have the technology to access these treatments (e.g. a computer, an internet provider or a smartphone etc.), books on prescription schemes are accessible to all who have a free library membership and, as such, are open to all socioeconomic groups.

In 2014 only around half of those experiencing symptoms of depression in the UK, were receiving treatment, with those with more severe symptomology more likely to be receiving treatment (McManus et al., 2016). If this scheme is able to reach those with mild-to-moderate symptoms of depression, who are a. not presenting via traditional access routes (e.g. via GP surgeries or IAPT services), b. not economically

able to access other forms of unguided support (such as computerised self-help) and c. are less likely to receive psychotherapy due to long waiting lists and the prioritising of patients with more severe symptomology, then inclusion of a range of evidence-based books, from different perspectives, is crucial. Not all patients will find CBT a suitable treatment approach and NICE (2009) guidelines state that a patient's preferences should be taken into consideration when allocating treatment. Patient preference in the treatment of depression has more recently come under investigation (Winter & Barber, 2013), with some researchers finding an improvement in efficacy when patients are allocated their preferred treatment (Geers et al., 2013), although the evidence is mixed (see Gelhorn, Sexton & Classi, 2011). Evidence suggests that psychotherapy from a range of other perspectives (e.g. interpersonal psychotherapy, behavioural activation, problem-solving therapy, psychodynamic therapy, social skills therapy & supportive counselling) is effective at reducing depression symptomology (Barth et al., 2013) and given the evidence for PP for reducing depression symptomology it would be beneficial for patients to have a range of treatment approaches represented via books on prescription schemes, where evidence-based self-help books are available.

From a public health perspective the inclusion of self-help titles from psychological perspectives other than CBT may be a cost-effective way to reach those with mild-to-moderate symptoms of depression who may not be receiving treatment elsewhere, and who may not wish to use CBT. Books on prescription schemes are seen as a cost-effective method of providing self-help treatment to those with mild-to-moderate symptomology. The Reading Agency (2015b) estimate that the national cost average of delivering a 'treatment' (i.e. a book loan) is £1 per person. In comparison each IAPT session costs between £32.50 and £55.20 depending on treatment type

(e.g. low vs. high intensity) (Department of Health, 2011). As the majority of patients, accessing this scheme are self-referring (The Reading Agency, 2015a), rather than being referred via traditional routes such as IAPT, the cost savings are potentially substantial. Future research should seek to evidence the cost-effectiveness of both books on prescription schemes and *'Positive Psychology for Overcoming Depression'* (Akhtar, 2012). Along the lines of Bolier et al., (2014), who have explored the cost-effectiveness of a PPI delivered via an online format.

Limitations and future research

Dropout rates from the study were notably high, at over 60% in both the PP and CBT group. The number of participants remaining in the RCT was small, although sufficient numbers remained in each group to detect a small effect size (Erdfelder, Fauchner & Buchner, 1996). High levels of attrition from self-help studies for depression are commonly found in the literature (e.g. Williams & Whitfield, 2001), however little is known about why this may be. Participants in the current study who dropped out did not have more severe symptomology prior to taking part in the study. Future research is needed to assess the factors that lead to high rates of dropout in self-help studies, especially for those suffering from symptoms of depression.

Participants in the study were asked to read eight chapters of the books they were allocated. This may have been time consuming and a potential contributor to the high dropout rates experienced. Further research should seek to explore whether reading this amount is necessary, or whether directing participants to the interventions contained within the books is sufficient in terms of reducing symptomology.

The sample was also predominantly made up of white British females, and as a result the findings should be interpreted with this in mind. Whilst unipolar

depression is twice as common in females, there remains an issue with the stigma of mental illness and the help-seeking behaviours of males, who are less likely to seek help for depression, and are less likely to receive a diagnosis even when presenting with the same symptomology as female patients (WHO, 2017). Furthermore, although little is known regarding attitudes towards bibliotherapy, some researchers have found that females have more positive attitudes towards bibliotherapy than males (Wilson & Cash, 2000). Additionally The Mental Health Foundation (2017) report that Black, Asian and minority ethnic (BAME) communities are more likely to be diagnosed with mental health disorders to begin with, and when receiving treatment are more likely to disengage from mental health services (such as IAPT etc.). As a result future research should explore the use of the PP book & PPIs in general for depression with a more diverse sample, particularly sampling male and BAME participants who may benefit from a broader range of treatment options.

No wait list or no-treatment control group was used in the current study and as a result we do not know how much more effective the PP book is over no-treatment or watchful waiting. In addition, it is also possible that the phenomena known as 'regression to the mean' took place. Future research may wish to compare the PP book to a no-treatment control group, in order to prevent the above from occurring (Yu & Chen, 2015).

Participants in the current study self-selected to take part and self-reported symptoms of depression and as a result future research may wish to explore the efficacy of the PP book with a GP or IAPT referred sample, who have a clinical diagnosis of depression. Books on prescription schemes, are however open to people without a clinical diagnosis or referral, who self-report symptoms of mental health

disorders. In fact the majority of those using the English books on prescription scheme in 2013 (80%) fell into this category (The Reading Agency, 2015a).

As the critique of Seligman et al., (2005) noted earlier, it is also possible that a placebo effect took place in the current study. The study was advertised online via Action for Happiness and it is possible that participants expected to feel happier and less depressed as a result of taking part in a study endorsed by this organisation. It is also possible that participants may have had considerable previous knowledge of the concepts of Positive Psychology as they were following Action for Happiness on social media. In addition the therapeutic effects of reading on depression symptoms have been noted (e.g. Billington, Dowrick, Hamer, Robinson & Williams, 2010), however one could argue the same placebo and therapeutic effects would occur when readers choose a self-help book endorsed by one of the books on prescription schemes available in the UK and beyond. Further research is needed to test the PP book in situ but it is hypothesised that similar reductions in symptomology would occur.

The Psychiatric Morbidity Survey (McManus et al., 2016) noted comorbidity between many mental health disorders, including depression, and lower verbal IQ. Those with lower scores on The National Adult Reading Test (Nelson & Wilson, 1991) were more likely to report experiencing a mental health disorder such as depression. This is problematic for books on prescription schemes, and the use of bibliotherapy to treat mild-to-moderate depression, as many of those in need may not have the reading ability to utilise these resources. Indeed Martinez et al., (2008) found that around 5.2 million adults in England can be described as ‘functionally illiterate’, meaning that they would be unable to read many of the books prescribed via these schemes. The reading age of the PP book is unknown at this time (and future research should seek to remedy this), but regardless other means of dissemination, alongside

self-help books, are required given the differences in preferences for depression treatment (Hanson, Webb, Sheeran & Turpin, 2016). Audio books may be one such method for reaching this audience, and they could be distributed alongside self-help books via libraries (McKenna, Hevey & Martin, 2010). Researchers have yet to assess the impact of listening to an audio self-help book on depression symptomology and as such future research in this area is also required.

Finally, the current study tested the efficacy of two specific self-help books, one from a CBT perspective and one from a PP perspective, and while these books were effective at reducing symptomology in the current study, generalisations cannot be made to all self-help books targeting depression.

4.2 Conclusions

The current study was primarily concerned with establishing whether PPIs could be effectively delivered via bibliotherapy. Previous research suggested that PPIs could effectively reduce symptoms of depression and improve well-being (Bolier et al., 2013; Sin & Lyubomirsky, 2009), with researchers now focused on determining effective ways of disseminating these interventions to patients (Hone et al., 2015). The results of the current pilot study found that both '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) and '*Overcoming Depression: A self-help guide using Cognitive Behavioural Techniques*' (Gilbert, 2009) reduced symptoms of depression and increased feelings of well-being when delivered over an 8-week intervention period with reminder emails sent weekly. Changes in depression and well-being scores were sustained for one month post-intervention with no differences noted between the two books.

As a result of this pilot investigation, further research should assess the use of '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) as a bibliotherapy

intervention for depression and well-being. Future studies should seek to (1) include a no-treatment control group, or treatment as usual control group, (2) recruit a clinical sample of participants who have a diagnosis of depression, (3) recruit a larger sample that is gender-balanced and ethnically diverse. Bibliotherapy may be able to reach those with mild-to-moderate symptomology who may not currently be presenting via traditional routes, or who may not be prioritised for high-intensity interventions due to long waiting lists for treatment. Currently users of bibliotherapy are able to access self-help books in numerous ways, such as privately purchasing self-help books or accessing self-help books via books on prescription schemes. The latter is preferable due to the evidence-based nature of the titles prescribed. One drawback however is the fact that all the titles on offer for depression are written from a CBT perspective, offering little choice for those patients who have found that CBT is not a good fit for them. The expansion of these schemes to include other evidence-based titles may be beneficial to the NHS in terms of reducing the cost and burden of treating the growing numbers of patients presenting with mild-to-moderate symptoms of depression in the UK and beyond.

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Ethical statements

This research was conducted in accordance to the Ethical Principles of Psychologists and Code of Conduct as set out by the APA http://www.apa.org/ethics/code/. Ethical approval was gained via Sheffield Hallam University.

Conflict of Interest

Dr Katie Hanson has no conflict of interest with respect to this publication.

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Figure 1: Flow of Participants through the Trial

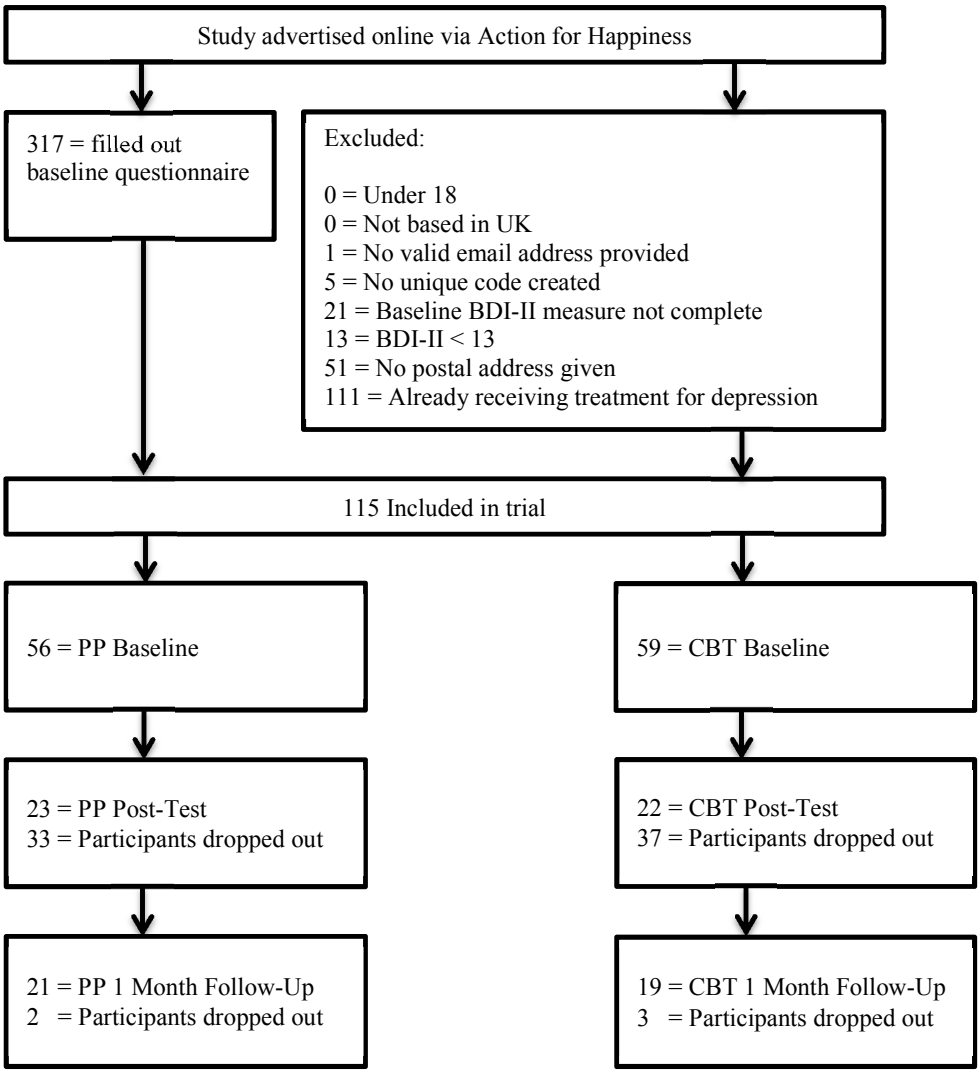


Table 1: Books Chapters Participants read over the course of the 8-Week Intervention

Week	PP Book	CBT Book
1	Positive Emotions: The upward spiral to well-being	Mindful Preparations for Working with Depression
2	Savouring the Moment	Switching our Minds to Kindness and Compassion
3	The Attitude of Gratitude	Changing Unhelpful Thoughts and Feelings: Balance and Compassion
4	Meditation: The mindful approach	Styles of Depressive Thinking: How to Develop Helpful Styles
5	Learning Optimism: Psychological self-defense	Writing Things Down: How to do it and why it can be helpful
6	Resilience: The road to recovery	Changing Behavior: A compassionate approach
7	Positive Connections: Other people matter	Developing Supportive Relationships with Ourselves
8	Vitality: Mind, body and sprit	Stop Criticizing and Bullying yourself: How to treat yourself with compassion

Table 2: Mean (SD) and Percentage Demographic Characteristics and Baseline Depression and Well-Being Scores for Participants in the PP Group Versus the CBT Group who Dropped out of the Study at 8-Weeks Post-Test and One-Month Follow-Up

	Post-Test		Follow-Up	
Measure	PP (N = 33)	CBT (N = 37)	PP (N = 2)	CBT (N = 3)
% Female	78.79%	89.19%	100.00%	100.00%
Age (SD)	43.21 (12.07)	35.76 (9.47)	29.50 (3.54)	34.67 (7.23)
% White British	81.82%	91.89%	100.00%	100.00%
History of Depression	48.48%	51.35%	50.00%	100.00%
Baseline BDI-II	27.82 (9.49)	28.81 (10.62)	33.50 (27.58)	33.67 (12.58)
Baseline SHS	3.55 (0.83)	3.45 (0.86)	3.63 (0.88)	3.25 (0.50)
Baseline SWL	14.39 (4.97)	16.41 (5.96)	16.50 (13.44)	11.67 (6.11)
Baseline PA	20.58 (5.29)	21.95 (6.27)	24.00 (8.49)	22.00 (2.65)
Baseline NA	28.91 (6.93)	30.38 (7.53)	29.00 (4.24)	30.33 (11.55)
Baseline PWB - Autonomy	23.82 (7.77)	24.41 (6.63)	19.50 (0.71)	20.33 (5.03)
Baseline PWB - Environmental Mastery	22.67 (4.10)	22.38 (4.09)	25.50 (7.78)	20.00 (3.61)

Table 2: Mean (SD) and Percentage Demographic Characteristics and Baseline Depression and Well-Being Scores for Participants in the PP Group Versus the CBT Group who Dropped out of the Study at 8-Weeks Post-Test and One-Month Follow-Up

	Post-Test		Follow-Up	
Measure	PP (N = 33)	CBT (N = 37)	PP (N = 2)	CBT (N = 3)
Baseline PWB - Personal Growth	28.48 (6.04)	28.81 (6.57)	24.50 (10.61)	26.00 (3.00)
Baseline PWB - Positive Relations	27.51 (7.27)	27.41 (7.14)	34.00 (5.66)	22.00 (8.89)
Baseline PWB - Purpose in Life	23.52 (5.24)	25.27 (4.13)	22.00 (12.73)	22.33 (4.16)
Baseline PWB- Self-Acceptance	18.06 (5.32)	19.46 (6.28)	18.50 (13.44)	14.33 (6.43)

Table 3: Mean (SD) and Percentage Demographic Characteristics of Participants in the PP Group and CBT group who Provided 8-Week Post-Test and One-Month Follow-Up Data

Measure	PP (N = 21)	CBT (N = 19)
% Female	90.48%	89.47%
Mean Age (SD)	40.57 (*SD* = 11.98)	40.84 (*SD* = 11.63)
% White/White British [1]	95.24%	94.74%
% History of Depression	42.86%	68.42%
% Book Read	92.41%	90.55%
% Kept Book	100.00%	94.74%
% Maintenance	52.38%	52.68%

[1] Of the participants who completed the study all except one in each group fell into the White/White British category. The remaining participant in the PP group classified themselves as European, while the remaining participant in the CBT group classified themselves as being from Mixed/Multiple backgrounds.

Table 4: Mean (SD) Depression and Well-Being scores for Participants in the PP Group and CBT Group who Provided Baseline, 8-Week Post-Test and 1 Month Follow-Up Data

Measure	Time	PP (N = 21)	CBT (N = 19)
BDI-II	Baseline	27.10 (*SD* = 9.17)	29.21 (*SD* = 9.54)
	Post-Test	12.70 (*SD* = 11.55)	14.44 (*SD* = 9.33)
	Follow-Up	10.74 (*SD* = 9.79)	14.19 (*SD* = 11.54)
SHS	Baseline	3.68 (*SD* = 0.62)	3.71 (*SD* = 0.89)
	Post-Test	4.18 (*SD* = 1.07)	4.84 (*SD* = 0.66)
	Follow-Up	4.27(*SD* = 0.97)	4.42 (*SD* = 1.23)
SWL	Baseline	15.10 (*SD* = 5.73)	17.79 (*SD* = 5.48)
	Post-Test	20.81 (*SD* = 6.95)	22.53 (*SD* = 5.53)
	Follow-Up	21.67 (*SD* = 6.73)	21.58 (*SD* = 5.28)

Table 4: Mean (SD) Depression and Well-Being scores for Participants in the PP Group and CBT Group who Provided Baseline, 8-Week Post-Test and 1 Month Follow-Up Data

Measure	Time	PP (N = 21)	CBT (N = 19)
PA	Baseline	20.76 (*SD* = 6.00)	21.63 (*SD* = 6.62)
	Post-Test	25.24 (*SD* = 5.50)	26.44 (*SD* = 6.46)
	Follow-Up	25.90 (*SD* = 5.20)	24.95 (*SD* = 7.55)
NA	Baseline	27.62 (*SD* = 5.95)	28.84 (*SD* = 8.99)
	Post-Test	18.19 (*SD* = 5.90)	21.58 (*SD* = 8.80)
	Follow-Up	17.81 (*SD* = 6.61)	24.11 (*SD* = 11.68)
PWB - Autonomy	Baseline	25.24 (*SD* = 6.95)	25.00 (*SD* = 7.74)
	Post-Test	27.95 (*SD* = 7.47)	27.95 (*SD* = 8.17)
	Follow-Up	29.05 (*SD* = 7.26)	27.26 (*SD* = 8.34)

Table 4: Mean (SD) Depression and Well-Being scores for Participants in the PP Group and CBT Group who Provided Baseline, 8-Week Post-Test and 1 Month Follow-Up Data

Measure	Time	PP (N = 21)	CBT (N = 19)
PWB - Environmental Mastery	Baseline	23.24 (*SD* = 3.59)	23.89 (*SD* = 5.13)
	Post-Test	27.19 (*SD* = 4.34)	27.95 (*SD* = 4.17)
	Follow-Up	26.95 (*SD* = 4.40)	26.68 (*SD* = 5.17)
PWB - Personal Growth	Baseline	28.43 (*SD* = 5.99)	29.37 (*SD* = 5.17)
	Post-Test	33.24 (*SD* = 4.59)	33.21 (*SD* = 5.80)
	Follow-Up	33.76 (*SD* = 3.96)	33.47 (*SD* = 6.08)
PWB - Positive Relations	Baseline	25.05 (*SD* = 5.29)	27.11 (*SD* = 6.57)
	Post-Test	27.85 (*SD* = 5.43)	30.47 (*SD* = 4.39)
	Follow-Up	29.00 (*SD* = 5.11)	29.42 (*SD* = 5.72)

Table 4: Mean (SD) Depression and Well-Being scores for Participants in the PP Group and CBT Group who Provided Baseline, 8-Week Post-Test and 1 Month Follow-Up Data

Measure	Time	PP (N = 21)	CBT (N = 19)
PWB - Purpose in Life	Baseline	23.52 (*SD* = 7.05)	26.05 (*SD* = 4.75)
	Post-Test	29.62 (*SD* = 6.14)	29.63 (*SD* = 5.07)
	Follow-Up	29.29 (*SD* = 6.53)	28.58 (*SD* = 4.56)
PWB- Self-Acceptance	Baseline	18.57 (*SD* = 5.82)	19.84 (*SD* = 5.75)
	Post-Test	24.20 (*SD* = 7.09)	25.56 (*SD* = 6.56)
	Follow-Up	24.95 (*SD* = 5.97)	25.84 (*SD* = 7.27)

Table 5: 2x3 Mixed ANOVAs Investigating the Effects of Time (Baseline versus 8-Week Post-test versus one-month Follow-up) and Condition (PP versus CBT) on Levels of Depression and Well-Being

Main effect	DV	df	df	F	p	η^2
Time	BDI-II	2	37	46.92	.00	.76
	SHS	2	37	18.84	.00	.51
	SWL	2	37	21.98	.00	.54
	PA	2	37	9.65	.00	.36
	NA	2	37	43.89	.00	.76
	PWB - Autonomy	2	37	8.84	.00	.32
	PWB - Environmental Mastery	2	37	15.04	.00	.45
	PWB - Personal Growth	2	37	20.89	.00	.53
	PWB - Positive Relations	2	37	25.29	.00	.58
	PWB - Purpose in Life	2	37	16.80	.00	.48
	PWB- Self-Acceptance	2	37	23.03	.00	.57

Table 5: 2x3 Mixed ANOVAs Investigating the Effects of Time (Baseline versus 8-Week Post-test versus one-month Follow-up) and Condition (PP versus CBT) on Levels of Depression and Well-Being

Main effect	DV	df	F	p	η^2
Condition	BDI-II	1	0.44	.51	.01
	SHS	1	1.29	.11	.03
	SWL	1	0.72	.39	.10
	PA	1	0.08	.58	.00
	NA	1	2.53	.34	.06
	PWB - Autonomy	1	0.09	.91	.00
	PWB - Environmental Mastery	1	0.10	.36	.03
	PWB - Personal Growth	1	0.02	.71	.00
	PWB - Positive Relations	1	1.27	.22	.03
	PWB - Purpose in Life	1	0.14	.34	.00
	PWB- Self-Acceptance	1	0.61	.24	.02

Table 5: Four 2x3 Mixed ANOVAs Investigating the Effects of Time (Baseline versus 8-Week Post-test versus one-month Follow-up) and Condition (PP versus CBT) on Levels of Depression and Well-Being

Main effect	DV	df	df	F	p	η^2
Interaction	BDI-II	2	30	1.29	.29	.08
	SHS	2	37	2.99	.47	.14
	SWL	2	37	2.01	.39	.10
	PA	2	37	1.77	.50	.09
	NA	2	37	2.57	.19	.12
	PWB - Autonomy	2	37	1.23	.49	.06
	PWB - Environmental Mastery	2	37	0.61	.64	.03
	PWB - Personal Growth	2	37	0.33	.62	.02
	PWB - Positive Relations	2	37	1.05	.35	.06
	PWB - Purpose in Life	2	37	2.13	.18	.10
	PWB - Self-Acceptance	2	37	0.09	.91	.01

Supplementary materials:

1. Instruction letter

Dear participant,

First let me thank you for taking part in this research study. This study investigates how effective self-help books can be for tackling feelings such as:

- Low mood
- Unhappiness
- Sadness
- Depression

This pack contains your self-help book and an instruction leaflet called "Feeling worse, not better" - please refer to this leaflet for instructions on what to do should any feelings of sadness or depression worsen.

Each week you will receive an email outlining which of the chapters in the self-help book you should read - you are scheduled to receive the first of these emails on DATE. You will receive 8 of these emails in total and be asked to read 8 chapters of the self-help book over an 8 week period.

After this time, you will receive another email that will ask you to fill out a follow-up questionnaire - this questionnaire will assess if the self-help book has improved your mood, level of happiness etc. A further follow-up email will also be sent 1 month after the intervention period is over. This questionnaire will measure whether longer term improvements have been made to mood as a result of reading the self-help book. Participants who complete all of these questionnaires will be sent a £10 high street shopping voucher.

If you have any questions regarding the study or would like further information, please email me on the address provided below.

Many thanks

XXXXXXXXX
XXXXXXXXX
XXXXXXXXX
XXXXXXXXX

2. '*Feeling worse not better*' leaflet

Feeling worse, not better?

If you are in crisis, despairing or suicidal, contacting one of the agencies below can make all the difference:

Your own GP or the Accident and Emergency department at your local hospital

The Samaritans (24 hours) □
Telephone 0845 7 90 90 90 or Email: jo@samaritans.org

NHS Direct for England and Wales (24 hours) □
Telephone 0845 4647

Breathing Space □
6pm - 2am (Monday to Thursday) □
6pm - 6am at weekends (Friday, Saturday, Sunday)
Telephone 0800 83 85 87

Lifeline Charity
Telephone: 0808 808 8000

3. Weekly emails

PP Group:

Week 1

First let me thank you for taking part in this research study. You should now have received your self-help book (if you have not yet received your self-help book please email me at XXXXXXXXX).

Each week you will receive an email to let you know which chapter we would like you to read that week. As you will notice there are more than eight chapters in the book, we will ask you to read eight of the content chapters (i.e. those that contain exercises designed specifically to help you start to tackle your low mood and negative feelings) but please feel free to read the other chapters (these are more theoretical but may also be beneficial).

This week we would like you to read chapter 3 – Positive Emotions: The upward spiral to well-being. This chapter outlines the role emotions play in how we think and feel and why positive emotions can help us cope in stressful or depressing time. This chapter contains an exercise called the "playlist" which is designed to help you build more positive emotions into your day and help you overcome feelings of sadness, unhappiness or depression. Please read this chapter and complete the exercise outlined on page 51.

If you have any questions please feel free to get in touch.

Best Wishes

XXXXXXXXX
XXXXXXXXX
XXXXXXXXX
XXXXXXXXX

note: If at any point you begin to feel worse, or are worried please see the “Feeling Worse, Not Better” instructions which can be found on a separate sheet within your self-help book (if you lose these or cannot find them please contact me at XXXXXXXXX for a further copy).

Week 2

First let me thank you for taking part in this research study. You should now have read though one chapter of the book and completed the exercises in that chapter. I hope you have found this beneficial so far.

This week we would like you to read chapter 4 – Savouring the Moment. This chapter outlines how when we are feeling low we often fail to notice the good in our lives. Savouring is the opposite of this; it is noticing and appreciating the good things in our lives even if they are relatively small or minor. By doing so, we can build the positive emotions we feel and reduce the negative. This chapter contains an exercise called the "savouring schedule" which is designed to help you build more positive emotions into your day and help you overcome feelings of sadness, unhappiness or depression. Please read this chapter and complete the exercises described.

If you have any questions please feel free to get in touch.

Best Wishes

XXXXXXXXX
XXXXXXXXX
XXXXXXXXX
XXXXXXXXX

note: If at any point you begin to feel worse, or are worried please see the “Feeling Worse, Not Better” instructions which can be found on a separate sheet within your self-help book (if you lose these or cannot find them please contact me at XXXXXXXXX for a further copy).

4. MANOVA Assumptions

Univariate outliers:

Boxplots identified a number of univariate outliers in the data set for BDI, PA, NA, PWB – Autonomy, PWB – Environmental Mastery, PWB - Purpose in Life and PWB- Self-Acceptance. See tables 1-7. No outliers were found for SWL, SHS, PWB Personal Growth, & PWB Positive Relations.

Table 1: Boxplot analysis for BDI scores at Baseline, Post-Test & Follow-Up

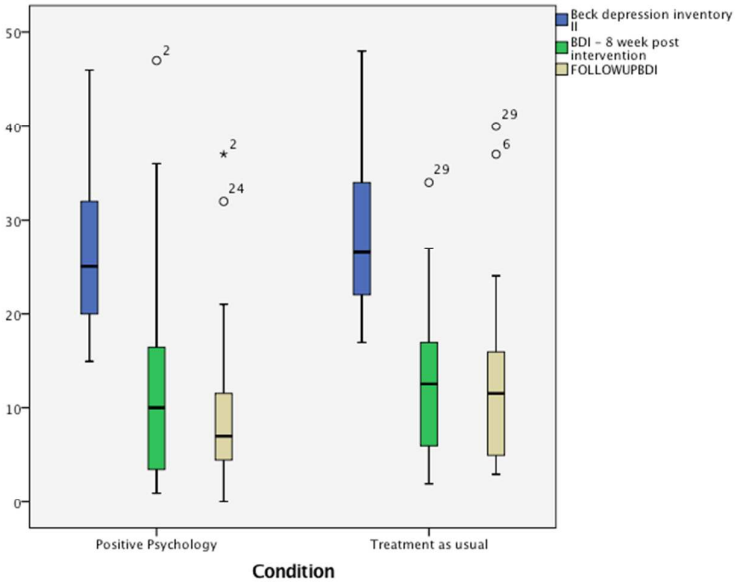


Table 2: Boxplot analysis for PA scores at Baseline, Post-Test & Follow-Up

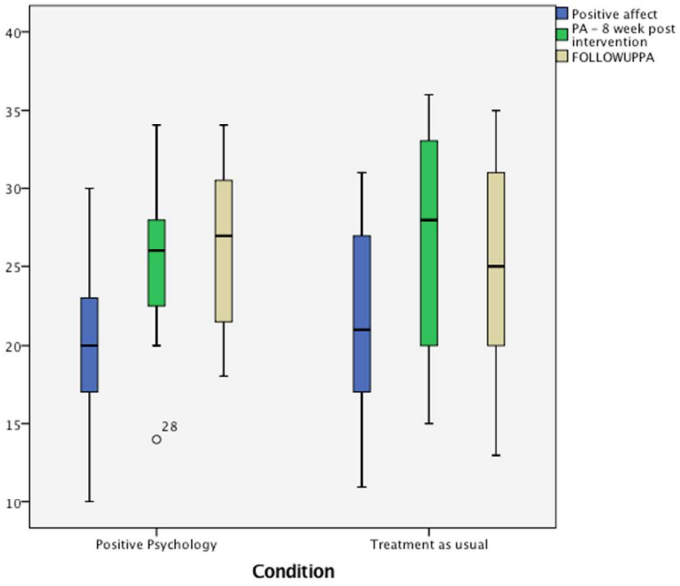


Table 3: Boxplot analysis for NA scores at Baseline, Post-Test & Follow-Up

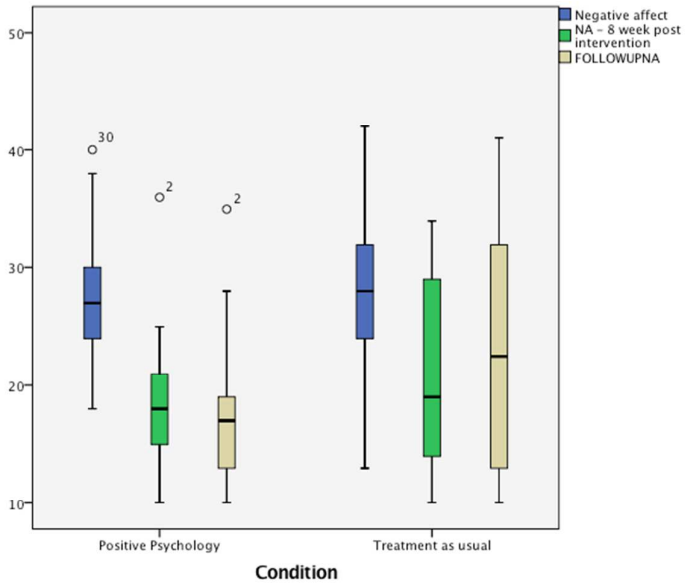


Table 4: Boxplot analysis for PWB Autonomy scores at Baseline, Post-Test & Follow-Up

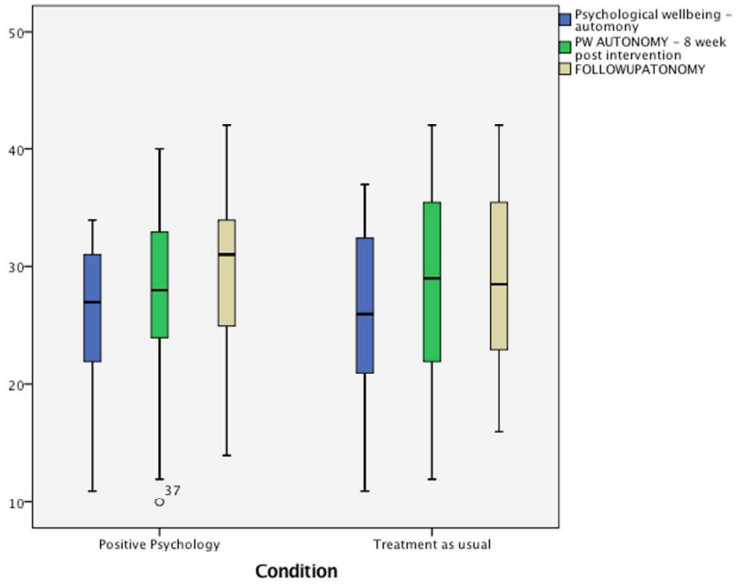


Table 5: Boxplot analysis for PWB Environmental Mastery scores at Baseline, Post-Test & Follow-Up

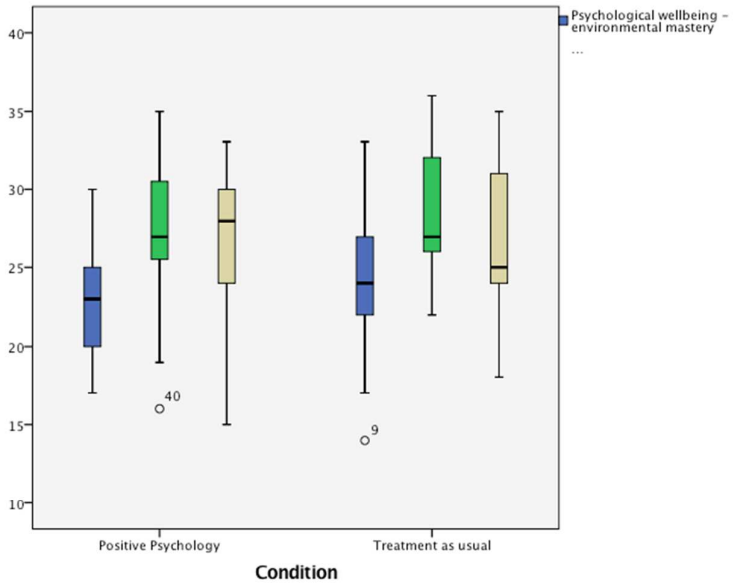


Table 6: Boxplot analysis for PWB Purpose in Life scores at Baseline, Post-Test & Follow-Up

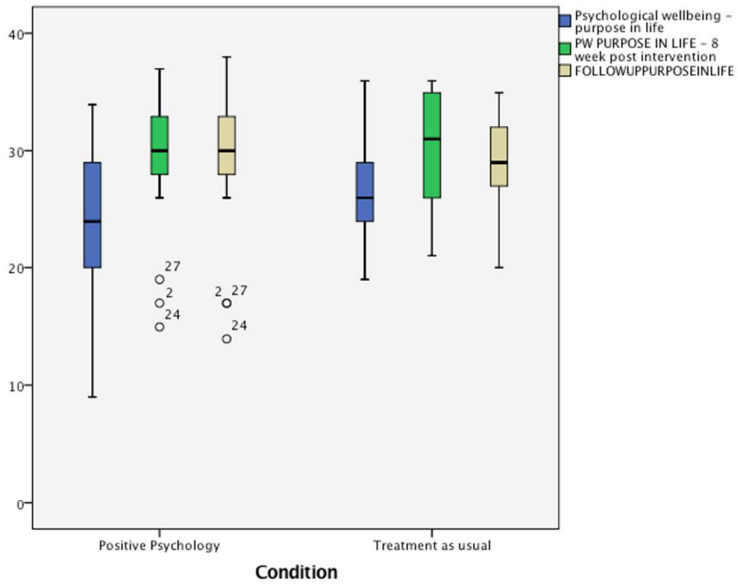
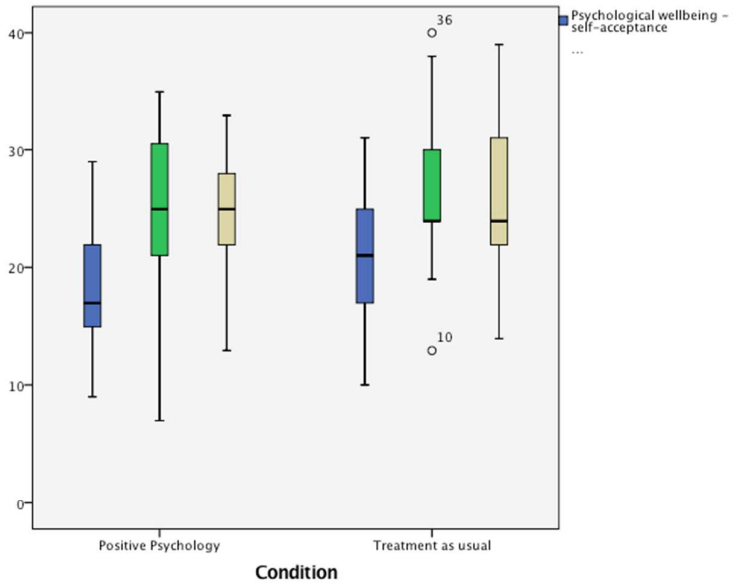


Table 7: Boxplot analysis for PWB Self-Acceptance scores at Baseline, Post-Test & Follow-Up



The baseline MANOVA was run with and without the outliers to establish their impact upon the results. Both tests found no significant differences between the two groups at baseline ($p < 0.05$ in both cases) in terms of their depression and well-being scores.

As a result of the above findings, the decision was taken not to remove or transform the outliers identified in the boxplots.

Multivariate outliers:

There were no multivariate outliers in the data, as assessed by Mahalanobis distance (all values under the critical value of 31.26).

Normality:

Depression and well-being scores were predominantly normally distributed with skewness (SE) and kurtosis (SE) reported in Table 8. However, at post-test the PP group violated kurtosis for BDI (Z score = -2.74) and at follow-up the PP group violated skewness for BDI (Z score = -3.01). However, as ANOVA's are considered to be robust to violations, especially in relation to normality when the sample size is equal (Howell, 2012) the decision was taken not to transform the data.

Table 8: Skewness and Kurtosis Test Results for each Dependant Variable (Depression and Well-being scores) by each level of the Independent Variable (PP group vs. CBT group)

Measure	Group	Time	Skewness	(SE)	Kurtosis	(SE)
BDI	PP	Baseline	0.773	(0.512)	-0.144	(0.992)
	CBT		1.287	(0.564)	1.491	(1.091)
	PP	Post-Test	1.330	(0.550)	2.909	(1.063)
	CBT		0.222	(0.616)	-1.223	(1.191)
	PP	Follow-Up	1.656	(0.550)	2.225	(1.063)
	CBT		1.149	(0.564)	0.842	(1.091)
SHS	PP	Baseline	0.424	(0.512)	0.797	(0.992)
	CBT		-0.507	(0.564)	-0.267	(1.091)
	PP	Post-Test	0.419	(0.550)	-0.954	(1.063)
	CBT		0.574	(0.616)	-0.409	(1.191)
	PP	Follow-Up	0.316	(0.550)	-0.313	(1.063)
	CBT		-0.376	(0.564)	-0.403	(1.091)
SWL	PP	Baseline	-0.082	(0.564)	-0.908	(0.512)
	CBT		-0.082	(0.564)	-0.133	(1.091)
	PP	Post-Test	-0.934	(0.550)	0.241	(1.063)
	CBT		-0.434	(0.616)	-0.827	(1.191)
	PP	Follow-Up	-0.419	(0.550)	-0.228	(1.063)
	CBT		-0.575	(0.564)	-0.448	(1.091)
PA	PP	Baseline	0.314	(0.512)	0.151	(0.992)
	CBT		-0.276	(0.564)	-1.083	(1.091)
	PP	Post-Test	0.295	(0.550)	1.044	(1.063)
	CBT		-0.569	(0.616)	-0.571	(1.191
	PP	Follow-Up	0.086	(0.550)	-1.337	(1.063
	CBT		-0.104	(0.564)	-0.923	(1.091)

Table 8: Skewness and Kurtosis Test Results for each Dependant Variable (Depression and Well-being scores) by each level of the Independent Variable (PP group vs. CBT group)

Measure	Group	Time	Skewness	(SE)	Kurtosis	(SE)
NA	PP	Baseline	0.722	(0.512)	0.466	(0.992)
	CBT		0.124	(0.564)	-0.112	(1.091)
	PP	Post-Test	-0.288	(0.550)	-0.749	(1.063)
	CBT		0.700	(0.616)	-0.980	(1.191)
	PP	Follow-Up	1.215	(0.550)	1.525	(1.063)
	CBT		0.501	(0.564)	-0.879	(1.091)
PWB – Autonomy	PP	Baseline	-0.653	(0.512)	-0.583	(0.992)
	CBT		-0.260	(0.564)	-0.237	(1.091)
	PP	Post-Test	-0.729	(0.550)	0.544	(1.063)
	CBT		-0.664	(0.616)	-0.024	(1.191)
	PP	Follow-Up	-0.556	(0.550)	-0.445	(1.063)
	CBT		-0.003	(0.564)	-0.384	(1.091)
PWB – Environmental Mastery	PP	Baseline	-0.012	(0.512)	-0.402	(0.992)
	CBT		-0.051	(0.564)	-0.083	(1.091)
	PP	Post-Test	-1.024	(0.550)	2.667	(1.063)
	CBT		0.308	(0.616)	-0.582	(1.191)
	PP	Follow-Up	-0.939	(0.550)	1.027	(1.063)
	CBT		0.051	(0.564)	-1.006	(1.091)
PWB Personal Growth	PP	Baseline	-0.740	(0.512)	-0.162	(0.992)
	CBT		-0.780	(0.564)	0.294	(1.091)
	PP	Post-Test	-0.397	(0.550)	-0.984	(1.063)
	CBT		0.149	(0.616)	-1.487	(1.191)
	PP	Follow-Up	-0.764	(0.550)	1.329	(1.063)
	CBT		-0.622	(0.564)	-0.903	(1.091)

Table 8: Skewness and Kurtosis Test Results for each Dependant Variable (Depression and Well-being scores) by each level of the Independent Variable (PP group vs. CBT group)

Measure	Group	Time	Skewness	(SE)	Kurtosis	(SE)
PWB Positive Relations	PP	Baseline	0.189	(0.512)	-0.970	(0.992)
	CBT		0.179	(0.564)	0.438	(1.091)
	PP	Post-Test	0.583	(0.550)	-0.434	(1.063)
	CBT		0.528	(0.616)	-0.803	(1.191)
	PP	Follow-Up	-0.190	(0.550)	-0.435	(1.063)
	CBT		-0.447	(0.564)	-1.141	(1.091)
PWB - Purpose in Life	PP	Baseline	-0.464	(0.512)	-0.521	(0.992)
	CBT		0.275	(0.564)	-0.587	(1.091)
	PP	Post-Test	-1.242	(0.550)	1.760	(1.063)
	CBT		0.091	(0.616)	-1.576	(1.191)
	PP	Follow-Up	-0.936	(0.550)	0.147	(1.063)
	CBT		-0.527	(0.564)	0.229	(1.091)
PWB- Self-Acceptance	PP	Baseline	0.433	(0.512)	-0.786	(0.992)
	CBT		-0.168	(0.564)	-0.446	(1.091)
	PP	Post-Test	-0.266	(0.550)	-1.016	(1.063)
	CBT		1.407	(0.616)	1.447	(1.191)
	PP	Follow-Up	-0.581	(0.550)	-0.343	(1.063)
	CBT		-0.246	(0.564)	-0.476	(1.091)

Multicollinearity:

There was no evidence of multicollinearity, as assessed by Pearson correlation ($r > 0.09$ in all cases).

Sample size:

The study has x10 dependent variables (depression and well-being measures) and x2 levels of the independent variable (PP vs. CBT). To conduct a MANOVA more than x10 participants are required in each group. This assumption is met.

Homogeneity of Variance-Covariance Matrices:

There was homogeneity of variance-covariances matrices, as assessed by Box's test of equality of covariance matrices ($p > 0.05$).

Homogeneity of Variances:

There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ($p > .05$ in all cases).

5. Mixed Between Within ANOVA Assumptions

Outliers:

Boxplots identified a number of univariate outliers in the data set for BDI, PA, NA, PWB – Autonomy, PWB – Environmental Mastery, PWB - Purpose in Life and PWB- Self-Acceptance. (See tables 1-7 above). No outliers were found for SWL, SHS, PWB Personal Growth, & PWB Positive Relations.

A series of mixed between within ANOVA's were run with and without outliers to establish their impact upon the results. For BDI, PA, NA, PWB – Autonomy, PWB – Environmental Mastery, PWB - Purpose in Life and PWB- Self-Acceptance no differences were found when outliers were removed e.g there was still a main effect for time ($p < 0.01$) but not for condition ($p > 0.05$) and the interaction still remain non-significant ($p > 0.05$).

As a result of the above findings, the decision was taken not to remove or transform the outliers identified in the boxplots.

Normality:

Depression and well-being scores were predominantly normally distributed with skewness (SE) and kurtosis (SE) reported in Table 8 (see above). However, at post-test the PP group violated kurtosis for BDI (Z score = -2.74) and at follow-up the PP group violated skewness for BDI (Z score = -3.01). However, as ANOVA's are considered to be robust to violations, especially in relation to normality when the sample size is equal (Howell, 2012) the decision was taken not to transform the data.

Homogeneity of Variances:

There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ($p > .05$ in all cases).

Homogeneity of Covariances:

There was homogeneity of covariances, as assessed by Box's test of equality of covariance matrices ($p > 0.05$ in all cases).

References:

Howell, D. C. (2012). *Statistical methods for psychology*. Belmont, CA. Cengage Learning.

Positive Psychology for Overcoming Symptoms of Depression: A Pilot Study Exploring the Efficacy of a Positive Psychology Self-Help Book versus a CBT Self-Help Book

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Running head: *Positive psychology for depression*

Background: Depression is an extremely common mental health disorder, with prevalence rates rising. Low-intensity interventions are frequently used to help meet the demand for treatment. Bibliotherapy, for example, is often prescribed via books on prescription schemes (for example 'Reading Well' in England) to those with mild to moderate symptomology. Bibliotherapy can effectively reduce symptoms of depression (Naylor et al., 2010). However, the majority of self-help books are based on cognitive behavioural therapy (CBT), which may not be suitable for all patients. Research supports the use of positive psychology interventions for the reduction of

depression symptoms (Bolier et al., 2013) and as such self-help books from this perspective should be empirically tested. **Aims:** This study aimed to test the efficacy of '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012), a self-help book for depression that is based on the principles of positive psychology, in comparison with a CBT self-help book that is currently prescribed in England as part of the Reading Well books on prescription scheme. **Method:** Participants (n = 115) who were not receiving treatment, but had symptoms of depression, read the positive psychology or the CBT self-help book for 8 weeks. Depression and well-being were measured at baseline, post-test and 1-month follow-up. **Results:** Results suggest that both groups experienced a reduction in depression and an increase in well-being, with no differences noted between the two books. **Conclusions:** Future directions are discussed in terms of dissemination, to those with mild to moderate symptoms of depression, via books on prescription schemes.

Keywords: bibliotherapy, positive psychology, well-being, self-help, books on prescription, depression and positive psychology interventions

Introduction

Depression is an extremely common mental health disorder. The Adult Psychiatric Morbidity survey (McManus et al., 2016) estimates that the 12-month prevalence rate in the UK is around 2.9%. Increases from 2007 (2.6%) (McManus et al., 2009) and 1993 (1.8%) (Meltzer et al., 1995) have been noted. In 2010/11, the Centre For Economic Performance (2012) reported that the National Health Service (NHS) spent £0.2 billion providing psychotherapy. Psychotherapy is evidence-based (Cuijpers et al., 2013) and NICE (2009) recommend its use for those with mild to severe

depression. Demand, however, continues to outstrip capacity in the UK (NICE, 2011). The National Prescribing Centre (2010) report that the NHS spent around £227 million on anti-depressant medications and although evidence supports the use of such treatment (Gartlehner et al., 2011), NICE (2009) only recommends they are prescribed to those with moderate to severe depression.

The large and rising demand for psychotherapy and the cost of providing such care in the UK led to the introduction of the 'Improving Access to Psychological Therapies' (IAPT) programme (Layard et al., 2006). Patients with mild to moderate depression receive the least intrusive intervention first, with the aim of reducing their symptomology and also preventing their symptoms from worsening whilst waiting for access to psychotherapy. Low-intensity interventions such as bibliotherapy are recommended by NICE (2009) to treat those with mild to moderate depression. Evidence supports their use for this patient group (Floyd et al., 2004), but bibliotherapy in the UK predominantly stems from a cognitive behavioural (CBT) perspective, and if there is not a good person/activity fit with CBT then there are few other options available to these patients, other than joining a large waiting list for psychotherapy or taking anti-depressant medications. CBT for the treatment of depression is evidence based [see Cuijpers et al. (2013) for an overview], but evidence is emerging from other fields of psychology regarding low-intensity interventions. For example, within the field of positive psychology evidence supports the use of low-intensity interventions for mild to moderate depression.

Positive psychology interventions (PPIs) are '*treatment methods or intentional activities aimed at cultivating positive feelings, positive behaviors, or positive cognitions*' (Sin and Lyubomirsky, 2009; p. 467). PPIs were initially designed to increase well-being, but evidence suggests that PPIs that are unguided can also reduce

depression symptoms. Seligman et al. (2005) recruited 577 adults via the website that accompanies Seligman's (2002) book '*Authentic Happiness*'. Participants were randomized into one of four unguided PPIs that were delivered via the internet, or into a placebo control group. There were no differences in depression at baseline, but those who used either of the two tasks listed below had significantly decreased depression scores for up to 6 months post-intervention. The 'Three good things' task asked participants to write down three things that went well each day and their causes every night for one week. The 'Using signature strengths in a new way' task asked *participants* to take the Values in Action Character Strengths online measure (available via authentichappiness.org). This questionnaire revealed participants' top five scoring strengths, which are referred to as signature strengths. They were then asked to use their signature strengths in new or different ways for one week. Participants in this study were, however, recruited via a website that accompanies a positive psychology book that they had purchased. The study was advertised to participants using the title '*Happiness Exercises*' and the author of the book (who also led this research) discussed these interventions as being beneficial for boosting happiness. Perhaps a placebo effect took place, whereby participants took part in the study expecting to feel better. The findings were, however, replicated by Gander et al. (2013), who concealed the nature of the study by using the title '*Train your Strengths*' to advertise the study and thus overcome the potential for a placebo effect or experimenter bias to occur. Further researchers have also explored the impact of unguided PPIs on symptoms of depression (e.g. Mongrain et al., 2016; Reiter and Wilz, 2016) with similar results, and to date two meta-analyses of the use of PPIs for depression have been conducted. Sin and Lyubomirsky (2009) analysed 25 PPI studies, which measured depression as an outcome variable. Effect size *r* ranged from

small (–.28) to large (.81) (Cohen, 1992) with 80% of effect sizes in favour of PPI. The unweighted mean $r = .31$ demonstrated a medium effect size. Bolier et al. (2013) later carried out an updated meta-analysis, with fourteen PPI studies, where depression was measured as the outcome variable. At post-test the standardized mean difference between the intervention group and control was $d = .23$, again indicating small effects for PPIs using Cohen's *d* (Cohen, 1988).

Disseminating these evidence-based interventions beyond a research setting to people in the real world with symptoms of depression (Hone et al., 2015) is now a viable option. Self-help books may be one appropriate method as bibliotherapy can effectively reduce depression symptomology in comparison with no treatment (Den Boer et al., 2004) or treatment as usual (Naylor et al., 2010).

One method of accessing bibliotherapy is via books on prescription schemes. The first of these schemes was piloted in Cardiff in 2003 with the Welsh Assembly rolling this scheme out nationally in 2005 (NHS Direct Wales, 2011<1>). From 2003 schemes based on the Cardiff model were in operation across the UK (NHS Direct Wales, 2011<1>), with the Reading Well – Books on Prescription Scheme launching nationally in England in 2013 (The Reading Agency, 2013). Books are prescribed via multiple access routes, for example general practitioners (GPs), IAPT practitioners or other healthcare professionals are able to prescribe self-help books to patients who are experiencing disorders such as depression, anxiety, phobias or chronic fatigue, etc. Patients then take their prescription to a participating library, whereby they are able to borrow the self-help title prescribed. People can also borrow any of the self-help titles available at their local library without a prescription and indeed this is a popular access route, with 80% of book prescriptions in England coming via self-referrals in 2013 (The Reading Agency, 2015a).

These types of schemes, and bibliotherapy more generally, may not however be accessible to those with low levels of literacy. Indeed, Martinez et al. (2008) found that the reading ages of eight of the self-help books prescribed as part of books on prescription schemes in England and Wales, ranged from 12.6 to 15.4, which could be problematic given that the National Literacy Trust (Jama and Dugdale, 2012) report that around one in six adults in the UK have literacy levels below that of an 11-year-old.

The books prescribed as part of books on prescription schemes are all derived from CBT, for example in England there are three books available for depression (Gilbert, 2009; Greenberger and Padesky, 1995; Williams, 2011) which all stem from this perspective. However, as previously discussed, there is a growing evidence base to suggest that PPIs can effectively reduce depression (Bolier et al., 2013) and, as such, bibliotherapy and books on prescription schemes should be considered as a method of disseminating these interventions to those with mild to moderate depression (Parks and Szanto, 2013). Until fairly recently, however, there were no positive psychology self-help books that specifically targeted depression.

'*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) is the first self-help book that contains PPIs to specifically target depression. The aim of the current study is to establish whether a positive psychology self-help book, which is aimed at those with symptoms of depression, is as effective as a CBT self-help book, in terms of reducing depression and boosting feelings of well-being. This will be achieved via a randomized controlled trial (RCT) that will test the efficacy of the above self-help book in comparison with the CBT self-help book '*Overcoming Depression: A Self-Help Guide using Cognitive Behavioural Techniques*' (Gilbert, 2009) over an 8-week intervention period. Although grounded in the evidence-based

theory of CBT, there is actually little direct evidence for the use of the above book for the reduction of depression symptomology. As a result, the current study will also seek to provide evidence for the effectiveness of Gilbert (2009) alongside Akhtar (2012).

Method

Sample

Three hundred and seventeen participants responded by completing the baseline questionnaire. To be eligible to take part, participants needed to be aged 18 or over, provide valid contact information (e.g. email and postal address), have symptoms of depression at baseline [measured via the Beck Depression Inventory-II (BDI-II)], not already be receiving treatment, and be based in the UK. One hundred and fifteen participants were eligible to take part in the study (see Fig. 1 for exclusion criteria). Participants were aged between 19 and 69 years (mean = 39.48, *SD* = 11.32); 86.96% were female, and 90.43% were White/White British with the remaining participants made up of Asian/Asian British (5.22%), mixed/multiple backgrounds (1.74%), European (1.74%) or Black/Black British (0.87%). Participants' mean score on the BDI-II (Beck et al., 1996b) was 28.49 (*SD* = 10.06), indicating moderate depression.

Participant flow

Figure 1 shows the flow of participants through the trial.

Power analysis

G*Power (Erdfelder et al., 1996) revealed that for a mixed between–within analysis of variance, with 95% power and an alpha level of .05, a total sample size of 32

participants (16 per group) was required for a small effect size ($f = 0.25$). Larger numbers were, however, recruited as high rates of attrition are commonly reported for participants using self-help interventions, who have symptoms of depression (e.g. Williams and Whitfield, 2001).

Measures

At baseline, 8 weeks post-test and 1 month follow-up, the participants filled out the BDI-II (Beck et al., 1996b). Participants were asked to rate 21 items (e.g. '*Sadness*, *Crying*, *Loss of energy*', etc.) in terms of how often they have felt this way during the previous 2 weeks using a 4-point scale that ranged from 0 to 3, with high scores indicating a higher occurrence of each item during the 2 week time period. A score > 13 indicates the presence of symptomatology. The BDI-II has demonstrated high levels of internal consistency in previous research (α = .91) (Beck et al., 1996a), with α = .81, .93 and .89 reported at baseline, post-intervention and follow-up in the current study.

The Subjective Happiness Scale (SHS; Lyubomirsky and Lepper, 1999) was also administered, with participants asked to rate four statements (e.g. '*Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?*') in terms of agreement using a 7-point scale. Higher scores indicate a positive response; except for question 4, which is reverse coded, before all items are summed to create a total score. High total scores indicate higher levels of subjective happiness. The scale has demonstrated good internal consistency in previous research (α = .79 to .94) (Lyubomirsky and Lepper, 1999), with α = .76, .88 and .74 reported at baseline, post-intervention and follow-up in the current study.

The Satisfaction with Life Scale (SWL; Diener et al., 1985) was also administered. Participants are asked to rate their agreement with five statements (e.g. '*In most ways my life is close to my ideal*') using a 7-point scale that ranges from 7 = strongly agree, to 1 = strongly disagree. High scores indicate high levels of life satisfaction. The SWL has demonstrated good internal consistency in previous research (α = .87) (Diener et al., 1985), with α = .82, .91 and .89 reported at baseline, post-intervention and follow-up in the current study.

The Positive and Negative Affect Scale (PANAS; Watson et al., 1988) was also administered. Participants are asked to rate 20 emotions (e.g. '*Interested*, *Distressed*, *Excited*', etc.) in terms of how much they feel they have experienced each emotion over the past few weeks using a 5-point scale that ranges from 1 = very slightly or not at all, to 5 = extremely. Positive and negative emotions are summed independently to create positive and negative affect scores, with high scores indicating higher levels of affect. The PANAS has demonstrated good internal consistency (α = .86 to .90) previously (Watson et al., 1988), with α = .61/.72, .77/.62 and .77/.62 reported for positive affect and negative affect respectively at baseline, post-intervention and follow-up in the current study.

Finally, the Ryff Scales of Psychological Well-Being (PWB; Ryff, 1989; Ryff and Keyes, 1995) were administered to measure six facets of psychological well-being, namely; Autonomy (e.g. '*I have confidence in my opinions, even if they are contrary to the general consensus*'), Environmental Mastery (e.g. '*In general, I feel I am in charge of the situation in which I live*'), Personal Growth (e.g. '*I think it is important to have new experiences that challenge how you think about yourself and the world*'), Positive Relations with Others (e.g. '*People would describe me as a giving person, willing to share my time with others*'), Purpose in Life (e.g. '*Some*

people wander aimlessly through life, but I am not one of them'), and Self-Acceptance (e.g. '*I like most aspects of my personality*'). Participants are asked to rate 42 statements in terms of agreement using a 6-point scale that ranges from 1 = strongly disagree, to 6 = strongly agree. High scores indicate high levels of psychological well-being. The PWB demonstrates good internal consistency in previous research (α = .86 to .93) (Ryff, 1989; Ryff and Keyes, 1995), with α = .87/.91/.90 (Autonomy), .64/.83/.78 (Environmental Mastery), .76/.72/.76 (Personal Growth), .70/.70/.64 (Personal Relationships), .73/.72/.72 (Purpose in Life) and .76/.87/.85 (Self-Acceptance) reported at baseline, post-intervention and follow-up in the current study.

Adherence was also measured post-intervention by asking participants to indicate how much of each chapter they had read, with responses ranging from 0 to 100%. An overall adherence score was created. Maintenance was measured at the 1 month follow-up. Participants were asked '*Have you kept the self-help book?*' and '*If yes, have you continued to read the self-help book and perform the exercises it describes?*' (responses were coded 'yes' or 'no' in both cases).

Materials

Participants in the PP group received '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012). This book contains 12 chapters, which discuss depression and introduce the theory of positive psychology, as well as specific topics such as gratitude or optimism. Each chapter is evidence-based and links to published research in the area in an accessible way. References are provided at the end of the book for readers who wish to follow up. The book contains exercises throughout each chapter for the reader to complete, for example the optimism chapter contains multiple exercises to cultivate optimism, such as Sheldon and Lyubomirsky's

(2006<2>) version of the 'best possible selves' interventions. In this task, the reader is asked to spend 20 minutes writing about a version of their future, in which everything has gone as well as it possibly could. Participants in the CBT group received '*Overcoming Depression: A Self-Help Guide using Cognitive Behavioural Techniques*' (Gilbert, 2009), a self-help book for depression that is available in England as part of the books on prescription scheme (The Reading Agency, 2013). Gilbert (2009) was selected due to its popularity and lower recommended retail price (RRP) in comparison with Greenberger and Padesky (1995) and Williams (2011). The Amazon best-selling rankings were used as a proxy to rate popularity, in the absence of loan data via books on prescription schemes. This book contains 22 chapters, which are split into three sections. Part 1 of the book helps the user to gain an understanding of depression and its causes. Part 2 provides the user with guidance on managing their depression. It focuses on increasing the user's activity levels, breaking problems down into manageable steps, and looks briefly into issues such as lack of sleep and alcohol misuse, etc. The book also explores the role of thoughts and feelings in depression, and identifies methods for labelling and challenging negative thoughts that may contribute to the symptoms of depression. Part 3 of the book looks at particular problems associated with depression, such as guilt, etc. Again, each chapter is evidence-based with references provided at the end of the book. Exercises are provided throughout each chapter for the reader to complete. Table 1 shows the eight book chapters that participants were asked to read during the course of the study.

Alongside the book, participants received an instruction letter, in which they were asked to read one chapter per week, and given the investigator's contact details should any issues arise. Participants also received a leaflet called '*Feeling worse not*

better' which detailed where to go for help should symptoms worsen during the course of the study. Participants were sent weekly reminder emails outlining which chapter they were to read each week (see supplementary material for instruction letter, leaflet and sample emails).

Procedure

The study was advertised online via Action for Happiness (actionforhappiness.org) and called for participants who were '*feeling down, low, sad or experiencing symptoms of depression*'. Participants were asked to complete a questionnaire to assess their suitability to take part in the study. This questionnaire measured baseline depression and well-being scores, as well as demographic information such as age, gender, ethnicity and history of depression (participants were asked 'Have you been diagnosed with depression in the past?' with a yes/no answer format). Eligible participants were randomized[1] to either the PP or CBT group. Participants were posted their self-help book and asked to read one chapter per week for 8 weeks. They received weekly emails to remind them which chapter to read. After 8 weeks post-test, and again at 1 month follow-up, participants were emailed a questionnaire that measured depression and well-being post-intervention, as well as attrition, adherence and maintenance. Participants who completed all questionnaires were sent a £10 voucher.

Ethics

[1] Participants were randomly allocated to either the PP group (condition 1) or the CBT group (condition 2) using Excel's random number generator formula (e.g. =RANDBETWEEN(1,2)). n = 56 participants were randomly allocated into condition 1, and n = 59 into condition 2.

This study was designed in accordance with The British Psychological Society Code of Ethics and Conduct (BPS, 2009). Ethical approval was gained from Sheffield Hallam University.

Results

Attrition

Figure 1 shows rates of attrition from the study. Chi square analysis found no significant differences in drop-out at post-test [χ (1) = .45, p = .50] or 1 month follow-up [χ (1) = .529, p = .47] between the two groups. Table 2 shows the characteristics of those who withdrew. Data were pooled across the two conditions for those who withdrew and those who remained in the study. There were no significant differences between those who failed to provide data and those who did, at either the post-test or the 1 month follow-up, in terms of gender, age, ethnicity, history of depression or baseline depression and well-being scores (p > .20 in all cases).

Sample

Table 3 shows the characteristics of the participants in the PP group (n = 21) and the CBT group (n = 19) who provided data at all three time points (i.e. baseline, 8 week post-test and 1 month follow-up). Chi square analysis found no significant differences between the two groups for gender, ethnicity, history of depression, percentage who kept the book post-intervention and maintenance (continued use of the book and/or exercises post-intervention) (p > .12 in all cases). Independent samples t-tests indicated no significant difference between the two groups for mean age (t (37) = –.20, p = .84) or adherence (percentage of book read during the intervention period) (t (36) = .80, p = .94). Table 4 shows the mean depression (BDI-II) and well-being

(SHS, SWL, PA, NA and PWB subscales) scores at baseline. A one-way multivariate analysis of variance (MANOVA) was used to test for differences in mean depression and well-being at baseline between those in the PP and CBT groups (see supplementary material for assumptions). The analysis showed that there were no significant differences between the two groups (F (11, 27) = .52, p = .87, Wilk's Λ = .81, η^2 = .19) prior to taking part in the study.

Effect of PP and CBT bibliotherapy on depression and well-being

Table 4 also shows the mean depression and well-being scores at post-test and 1 month follow-up. Table 5 shows a series of 2-way between-subjects (group: PP versus CBT) by 3-way within-subjects (time: baseline versus post-test versus 1 month follow-up) analyses of variance (ANOVAs). Depression and well-being scores were used as dependent variables (DV) to determine whether there were significant differences between the two groups across the three time points (see supplementary material for assumptions). The analysis found that for those in both the PP and CBT groups there was a significant main effect of time, indicating significant changes in depression and well-being from baseline to follow-up. Effect sizes ranged from a low of d = .32 to a high of d = .76, indicating small to medium effect sizes using Cohen's d (Cohen, 1988). Table 4 shows that BDI-II and NA scores decreased from baseline to post-test and follow-up, whilst SHS, SWL, PA and PWB subscale scores increased over the same time frame. *Post hoc* analysis, with Bonferroni adjustments, revealed that rates of depression and well-being fell significantly from baseline to post-test (p < .01 in all cases) and 1 month follow-up (p < .01 in all cases), but there were no significant changes in depression and well-being between post-test and 1 month follow-up (p > .13 in all cases), meaning that improvements were sustained for 1

month post-intervention. The main effect of group was not significant, indicating that there was no significant difference between the two books in terms of improvement in depression and well-being. There were no significant interactions between time and group for any of the depression and well-being measures.

Discussion

The current study sought to empirically test the efficacy of Akhtar (2012) in comparison with Gilbert (2009). It is the first RCT to test a PP self-help book designed specifically for the reduction of depression symptoms. The current study also sought to empirically test Gilbert (2009) as, although Gilbert (2009) is a popular book in the UK that is often recommended by therapists (Anderson et al., 2005), there is little empirical basis for its use.

The results of the current study show that the PP book '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) was as effective at reducing symptoms of depression and increasing feelings of well-being as the CBT book '*Overcoming Depression: A Self-Help Guide using Cognitive Behavioural Techniques*' (Gilbert, 2009) when delivered over an 8 week intervention period with reminder emails sent weekly. Changes in depression and well-being scores were sustained for 1 month post-intervention.

As a result, the main issue for researchers to address, with regard to PPIs, is how best to disseminate these interventions to those who would most benefit (Hone et al., 2015). Given the findings of the current research, bibliotherapy may be one appropriate method of dissemination. Bibliotherapy can be accessed in a number of ways, for example via the private purchase of a self-help book or via books on prescription schemes.

In England, 93% of libraries take part in books on prescription schemes, with participating libraries reporting nearly half a million loans of titles included on the books on prescription scheme since 2013. Prescriptions for these books come via multiple avenues such as GPs, IAPT services or other healthcare professionals. The vast majority in England, however (80% in 2013), come via self-referrals (The Reading Agency, 2015a). Since the scheme began in England, there has been a 97% increase in loans of the self-help titles included in this scheme, showing how inclusion of a title on this list is beneficial in terms of garnering the attention of those the book is targeting (i.e. those with mild to moderate symptomology). One of the main advantages of dissemination via books on prescription schemes is the ability to access those with mild to moderate depression who may not present for treatment via traditional routes (e.g. 80% of loans are via self-referral to the scheme). Another advantage to these types of schemes is their accessibility. The Psychiatric Morbidity Survey (McManus et al., 2016) reported a link between common mental health disorders (such as depression) and socio-economic adversity. Those who reported receiving the Employment and Support Allowance (ESA), a benefit aimed at those unable to work due to poor health or disability, were more likely to be experiencing a co-morbid mental health disorder, with nearly half reporting a suicide attempt. Bibliotherapy and particularly books on prescription schemes may be especially well placed to reach these vulnerable individuals. Whereas other self-help interventions, such as computerized self-help or apps that target mental health disorders, all require the user to have the technology to access these treatments (e.g. a computer, an internet provider or a smartphone, etc.), books on prescription schemes are accessible to all who have a free library membership and, as such, are open to all socioeconomic groups.

In 2014, only around half of those experiencing symptoms of depression in the UK were receiving treatment, with those with more severe symptomology more likely to be receiving treatment (McManus et al., 2016). If this scheme is able to reach those with mild to moderate symptoms of depression, who are (a) not presenting via traditional access routes (e.g. via GP surgeries or IAPT services), (b) not economically able to access other forms of unguided support (such as computerized self-help) and (c) are less likely to receive psychotherapy due to long waiting lists and the prioritizing of patients with more severe symptomology, then inclusion of a range of evidence-based books, from different perspectives, is crucial. Not all patients will find CBT a suitable treatment approach and NICE (2009) guidelines state that a patient's preferences should be taken into consideration when allocating treatment. Patient preference in the treatment of depression has more recently come under investigation (Winter and Barber, 2013), with some researchers finding an improvement in efficacy when patients are allocated their preferred treatment (Geers et al., 2013), although the evidence is mixed (see Gelhorn et al., 2011). Evidence suggests that psychotherapy from a range of other perspectives (e.g. interpersonal psychotherapy, behavioural activation, problem-solving therapy, psychodynamic therapy, social skills therapy and supportive counselling) is effective at reducing depression symptomology (Barth et al., 2013) and given the evidence for PP for reducing depression symptomology it would be beneficial for patients to have a range of treatment approaches represented via books on prescription schemes, where evidence-based self-help books are available.

From a public health perspective the inclusion of self-help titles from psychological perspectives other than CBT may be a cost-effective way to reach those with mild to moderate symptoms of depression who may not be receiving treatment

elsewhere, and who may not wish to use CBT. Books on prescription schemes are seen as a cost-effective method of providing self-help treatment to those with mild to moderate symptomology. The Reading Agency (2015b) estimate that the national cost average of delivering a 'treatment' (i.e. a book loan) is £1 per person. In comparison, each IAPT session costs between £32.50 and £55.20, depending on treatment type (e.g. low vs high intensity) (Department of Health, 2011). As the majority of patients accessing this scheme are self-referring (The Reading Agency, 2015a), rather than being referred via traditional routes such as IAPT, the cost savings are potentially substantial. Future research should seek to evidence the cost-effectiveness of both books on prescription schemes and '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012), along the lines of Bolier et al. (2014), who have explored the cost-effectiveness of a PPI delivered via an online format.

Limitations and future research

Drop-out rates from the study were notably high, at over 60% in both the PP and CBT group. The number of participants remaining in the RCT was small, although sufficient numbers remained in each group to detect a small effect size (Erdfelder et al., 1996). High levels of attrition from self-help studies for depression are commonly found in the literature (e.g. Williams and Whitfield, 2001), but little is known about why this may be. Participants in the current study who dropped out did not have more severe symptomology prior to taking part in the study. Future research is needed to assess the factors that lead to high rates of drop-out in self-help studies, especially for those suffering from symptoms of depression.

Participants in the study were asked to read eight chapters of the books they were allocated. This may have been time consuming and a potential contributor to the

high drop-out rates experienced. Further research should seek to explore whether reading this amount is necessary, or whether directing participants to the interventions contained within the books is sufficient in terms of reducing symptomology.

The sample was also predominantly made up of white British females, and as a result the findings should be interpreted with this in mind. Whilst unipolar depression is twice as common in females, there remains an issue with the stigma of mental illness and the help-seeking behaviours of males, who are less likely to seek help for depression, and are less likely to receive a diagnosis even when presenting with the same symptomology as female patients (WHO, 2017). Furthermore, although little is known regarding attitudes towards bibliotherapy, some researchers have found that females have more positive attitudes towards bibliotherapy than males (Wilson and Cash, 2000). In addition, the Mental Health Foundation (2017) report that Black, Asian and minority ethnic (BAME) communities are more likely to be diagnosed with mental health disorders to begin with, and when receiving treatment are more likely to disengage from mental health services (such as IAPT, etc.). As a result, future research should explore the use of the PP book and PPIs in general for depression with a more diverse sample, particularly sampling male and BAME participants who may benefit from a broader range of treatment options.

No wait list or no-treatment control group was used in the current study and as a result we do not know how much more effective the PP book is over no-treatment or watchful waiting. In addition, it is also possible that the phenomenon known as 'regression to the mean' took place. Future research may wish to compare the PP book with a no-treatment control group, in order to prevent the above from occurring (Yu and Chen, 2015).

Participants in the current study self-selected to take part and self-reported symptoms of depression, and future research may wish to explore the efficacy of the PP book with a GP- or IAPT-referred sample, who have a clinical diagnosis of depression. Books on prescription schemes are, however, open to people without a clinical diagnosis or referral, who self-report symptoms of mental health disorders. In fact the majority of those using the English books on prescription scheme in 2013 (80%) fell into this category (The Reading Agency, 2015a).

As the critique of Seligman et al. (2005) noted earlier, it is also possible that a placebo effect took place in the current study. The study was advertised online via Action for Happiness and it is possible that participants expected to feel happier and less depressed as a result of taking part in a study endorsed by this organization. It is also possible that participants may have had considerable previous knowledge of the concepts of Positive Psychology as they were following Action for Happiness on social media. In addition, the therapeutic effects of reading on depression symptoms have been noted (e.g. Billington et al., 2010), but one could argue that the same placebo and therapeutic effects would occur when readers choose a self-help book endorsed by one of the books on prescription schemes available in the UK and beyond. Further research is needed to test the PP book *in situ*, but it is hypothesizded that similar reductions in symptomology would occur.

The Psychiatric Morbidity Survey (McManus et al., 2016) noted co-morbidity between many mental health disorders, including depression, and lower verbal IQ. Those with lower scores on The National Adult Reading Test (Nelson and Wilson, 1991) were more likely to report experiencing a mental health disorder such as depression. This is problematic for books on prescription schemes, and the use of bibliotherapy to treat mild to moderate depression, as many of those in need may not

have the reading ability to utilize these resources. Indeed, Martinez et al. (2008) found that around 5.2 million adults in England can be described as 'functionally illiterate', meaning that they would be unable to read many of the books prescribed via these schemes. The reading age of the PP book is unknown at this time (and future research should seek to remedy this), but regardless of this, other means of dissemination, alongside self-help books, are required given the differences in preferences for depression treatment (Hanson et al., 2016). Audio books may be one such method for reaching this audience, and they could be distributed alongside self-help books via libraries (McKenna et al., 2010). Researchers have yet to assess the impact of listening to an audio self-help book on depression symptomology and future research in this area is also required.

Finally, the current study tested the efficacy of two specific self-help books, one from a CBT perspective and one from a PP perspective, and while these books were effective at reducing symptomology in the current study, generalizations cannot be made to all self-help books targeting depression.

Conclusions

The current study was primarily concerned with establishing whether PPIs could be effectively delivered via bibliotherapy. Previous research suggested that PPIs could effectively reduce symptoms of depression and improve well-being (Bolier et al., 2013; Sin and Lyubomirsky, 2009), with researchers now focused on determining effective ways of disseminating these interventions to patients (Hone et al., 2015). The results of the current pilot study found that both '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) and '*Overcoming Depression: A Self-Help Guide using Cognitive Behavioural Techniques*' (Gilbert, 2009) reduced symptoms of

depression and increased feelings of well-being when delivered over an 8 week intervention period with reminder emails sent weekly. Changes in depression and well-being scores were sustained for 1 month post-intervention with no differences noted between the two books.

As a result of this pilot investigation, further research should assess the use of '*Positive Psychology for Overcoming Depression*' (Akhtar, 2012) as a bibliotherapy intervention for depression and well-being. Future studies should seek to (1) include a no-treatment control group, or treatment as usual control group, (2) recruit a clinical sample of participants who have a diagnosis of depression, and (3) recruit a larger sample that is gender-balanced and ethnically diverse. Bibliotherapy may be able to reach those with mild to moderate symptomology who may not currently be presenting via traditional routes, or who may not be prioritized for high-intensity interventions due to long waiting lists for treatment. Currently, users of bibliotherapy are able to access self-help books in numerous ways, such as privately purchasing self-help books or accessing self-help books via books on prescription schemes. The latter is preferable due to the evidence-based nature of the titles prescribed. One drawback, however, is the fact that all the titles on offer for depression are written from a CBT perspective, offering little choice for those patients who have found that CBT is not a good fit for them. The expansion of these schemes to include other evidence-based titles may be beneficial to the NHS in terms of reducing the cost and burden of treating the growing numbers of patients presenting with mild to moderate symptoms of depression in the UK and beyond.

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Supplementary material

To view supplementary material for this article, please visit <insert link>

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Figure legend

Figure 1. Flow of participants through the trial

Author queries

(1) NHS Direct Wales, 2011 – not given in References (although NHS Direct Wales, 2017 is – but the 2017 reference isn't cited in text). Please clarify.

(2) Sheldon and Lyubomirsky (2006) – please provide a reference for this.

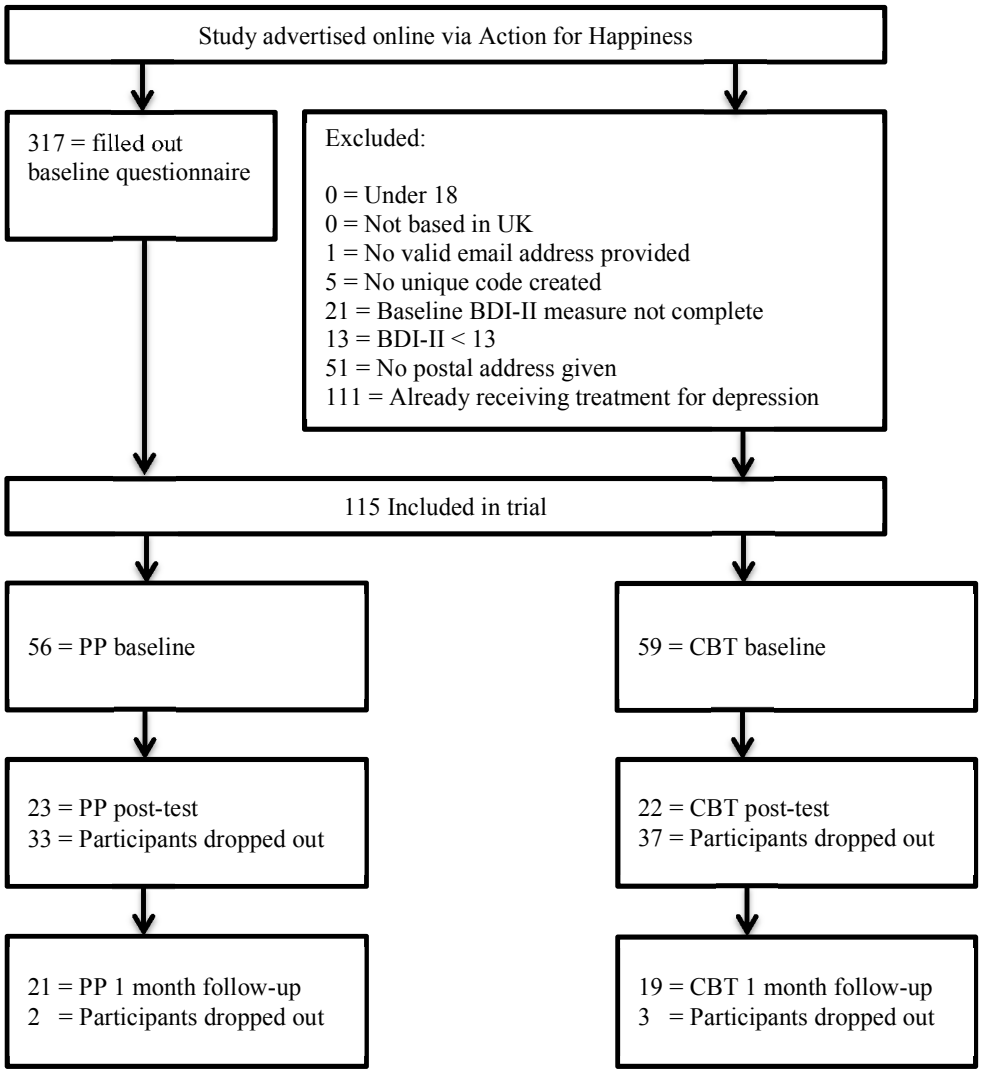
Study advertised online via Action for Happiness
317 = filled out baseline questionnaire
Excluded:
0 = Under 18
0 = Not based in UK
1 = No valid email address provided
5 = No unique code created
21 = Baseline BDI-II measure not complete
13 = BDI-II < 13
51 = No postal address given
111 = Already receiving treatment for depression
115 Included in trial
56 = PP baseline
59 = CBT baseline
23 = PP post-test
33 = Participants dropped out
22 = CBT post-test
37 = Participants dropped out
21 = PP 1 month follow-up
2 = Participants dropped out
19 = CBT 1 month follow-up
3 = Participants dropped out

Table 1. Books chapters that participants were asked to read over the course of the 8-week intervention

Week	PP book	CBT book
1	Positive emotions: the upward spiral to well-being	Mindful preparations for working with depression
2	Savouring the moment	Switching our minds to kindness and compassion
3	The attitude of gratitude	Changing unhelpful thoughts and feelings: balance and compassion
4	Meditation: the mindful approach	Styles of depressive thinking: how to develop helpful styles
5	Learning optimism: psychological self-defence	Writing things down: how to do it and why it can be helpful
6	Resilience: the road to recovery	Changing behavior: a compassionate approach
7	Positive connections: other people matter	Developing supportive relationships with uurselves
8	Vitality: mind, body and spirit	Stop criticizing and bullying yourself: how to treat yourself with compassion

Table 2. Mean (*SD*) and percentage demographic characteristics and baseline depression and well-being scores for participants in the PP group versus the CBT group who dropped out of the study at 8 weeks post-test and 1 month follow-up

	Post-test		Follow-up	
Measure	PP (*n* = 33)	CBT (*n* = 37)	PP (*n* = 2)	CBT (*n* = 3)
% Female	78.79%	89.19%	100.00%	100.00%
Age	43.21 (12.07)	35.76 (9.47)	29.50 (3.54)	34.67 (7.23)
% White British	81.82%	91.89%	100.00%	100.00%
History of depression	48.48%	51.35%	50.00%	100.00%
Baseline BDI-II	27.82 (9.49)	28.81 (10.62)	33.50 (27.58)	33.67 (12.58)
Baseline SHS	3.55 (0.83)	3.45 (0.86)	3.63 (0.88)	3.25 (0.50)
Baseline SWL	14.39 (4.97)	16.41 (5.96)	16.50 (13.44)	11.67 (6.11)
Baseline PA	20.58 (5.29)	21.95 (6.27)	24.00 (8.49)	22.00 (2.65)
Baseline NA	28.91 (6.93)	30.38 (7.53)	29.00 (4.24)	30.33 (11.55)
Baseline PWB – Autonomy	23.82 (7.77)	24.41 (6.63)	19.50 (0.71)	20.33 (5.03)
Baseline PWB – Environmental Mastery	22.67 (4.10)	22.38 (4.09)	25.50 (7.78)	20.00 (3.61)

Baseline PWB – Personal Growth	28.48 (6.04)	28.81 (6.57)	24.50 (10.61)	26.00 (3.00)
Baseline PWB – Positive Relations	27.51 (7.27)	27.41 (7.14)	34.00 (5.66)	22.00 (8.89)
Baseline PWB – Purpose in Life	23.52 (5.24)	25.27 (4.13)	22.00 (12.73)	22.33 (4.16)
Baseline PWB – Self-Acceptance	18.06 (5.32)	19.46 (6.28)	18.50 (13.44)	14.33 (6.43)

Table 3. Mean (*SD*) and percentage demographic characteristics of participants in the PP group and CBT group who provided 8 week post-test and 1 month follow-up data

Measure	PP (n = 21)	CBT (n = 19)
% Female	90.48%	89.47%
Age	40.57 (11.98)	40.84 (11.63)
% White/White British [1]	95.24%	94.74%
% History of depression	42.86%	68.42%
% Book read	92.41%	90.55%
% Kept book	100.00%	94.74%
% Maintenance	52.38%	52.68%

[1] Of the participants who completed the study, all except one in each group fell into the White/White British category. The remaining participant in the PP group classified themselves as European, while the remaining participant in the CBT group classified themselves as being from mixed/multiple backgrounds.

Table 4. Mean (*SD*) depression and well-being scores for participants in the PP group and CBT group who provided baseline, 8 week post-test and 1 month follow-up data

Measure	Time	PP (*n* = 21)	CBT (*n* = 19)
BDI-II	Baseline	27.10 (9.17)	29.21 (9.54)
	Post-test	12.70 (11.55)	14.44 (9.33)
	Follow-up	10.74 (9.79)	14.19 (11.54)
SHS	Baseline	3.68 (0.62)	3.71 (0.89)
	Post-test	4.18 (1.07)	4.84 (0.66)
	Follow-up	4.27 (0.97)	4.42 (1.23)
SWL	Baseline	15.10 (5.73)	17.79 (5.48)
	Post-test	20.81 (6.95)	22.53 (5.53)
	Follow-up	21.67 (6.73)	21.58 (5.28)

PA	Baseline	20.76 (6.00)	21.63 (6.62)
	Post-test	25.24 (5.50)	26.44 (6.46)
	Follow-up	25.90 (5.20)	24.95 (7.55)
NA	Baseline	27.62 (5.95)	28.84 (8.99)
	Post-test	18.19 (5.90)	21.58 (8.80)
	Follow-up	17.81 (6.61)	24.11 (11.68)
PWB – Autonomy	Baseline	25.24 (6.95)	25.00 (7.74)
	Post-test	27.95 (7.47)	27.95 (8.17)
	Follow-up	29.05 (7.26)	27.26 (8.34)

PWB – Environmental Mastery	Baseline	23.24 (3.59)	23.89 (5.13)
	Post-test	27.19 (4.34)	27.95 (4.17)
	Follow-up	26.95 (4.40)	26.68 (5.17)
PWB – Personal Growth	Baseline	28.43 (5.99)	29.37 (5.17)
	Post-test	33.24 (4.59)	33.21 (5.80)
	Follow-up	33.76 (3.96)	33.47 (6.08)
PWB – Positive Relations	Baseline	25.05 (5.29)	27.11 (6.57)
	Post-test	27.85 (5.43)	30.47 (4.39)
	Follow-up	29.00 (5.11)	29.42 (5.72)

PWB – Purpose in Life	Baseline	23.52 (7.05)	26.05 (4.75)
	Post-test	29.62 (6.14)	29.63 (5.07)
	Follow-up	29.29 (6.53)	28.58 (4.56)
PWB – Self-Acceptance	Baseline	18.57 (5.82)	19.84 (5.75)
	Post-test	24.20 (7.09)	25.56 (6.56)
	Follow-up	24.95 (5.97)	25.84 (7.27)

Table 5. 2 × 3 Mixed ANOVAs investigating the effects of time (baseline vs 8 week post-test vs 1 month follow-up) and condition (PP versus CBT) on levels of depression and well-being

Main effect	DV	d.f.	d.f.	*F*	*p*	η^2
Time	BDI-II	2	37	46.92	.00	.76
	SHS	2	37	18.84	.00	.51
	SWL	2	37	21.98	.00	.54
	PA	2	37	9.65	.00	.36
	NA	2	37	43.89	.00	.76
	PWB – Autonomy	2	37	8.84	.00	.32
	PWB – Environmental Mastery	2	37	15.04	.00	.45
	PWB – Personal Growth	2	37	20.89	.00	.53
	PWB – Positive Relations	2	37	25.29	.00	.58
	PWB – Purpose in Life	2	37	16.80	.00	.48
	PWB – Self-Acceptance	2	37	23.03	.00	.57

Condition	BDI-II	1	0.44	.51	.01
	SHS	1	1.29	.11	.03
	SWL	1	0.72	.39	.10
	PA	1	0.08	.58	.00
	NA	1	2.53	.34	.06
	PWB – Autonomy	1	0.09	.91	.00
	PWB – Environmental Mastery	1	0.10	.36	.03
	PWB – Personal Growth	1	0.02	.71	.00
	PWB – Positive Relations	1	1.27	.22	.03
	PWB – Purpose in Life	1	0.14	.34	.00
	PWB – Self-Acceptance	1	0.61	.24	.02

Interaction	BDI-II	2	30	1.29	.29	.08
	SHS	2	37	2.99	.47	.14
	SWL	2	37	2.01	.39	.10
	PA	2	37	1.77	.50	.09
	NA	2	37	2.57	.19	.12
	PWB – Autonomy	2	37	1.23	.49	.06
	PWB – Environmental Mastery	2	37	0.61	.64	.03
	PWB – Personal Growth	2	37	0.33	.62	.02
	PWB – Positive Relations	2	37	1.05	.35	.06
	PWB – Purpose in Life	2	37	2.13	.18	.10
	PWB – Self-Acceptance	2	37	0.09	.91	.01